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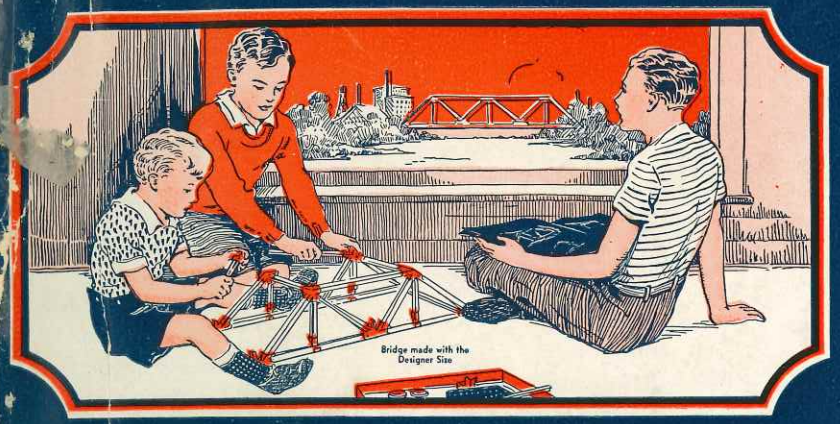

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MORE-
BOLTLE

MANUAL OF INSTRUCTIONS

MECCANO-MORECRAFT

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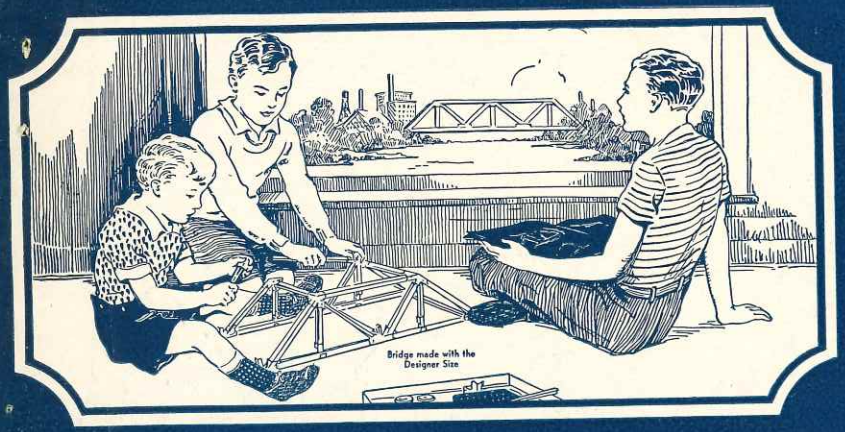

featuring the
MORE-CRAFT
BOLTLESS JOINT

MANUAL OF INSTRUCTIONS

MECCANO-MORECRAFT

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MECCANO-MORECRAFT

"The toy that grows with the boy"

Do you like to make models of things you have seen? Enjoy finding out the Hows and Whys? Want to build brand new buildings?

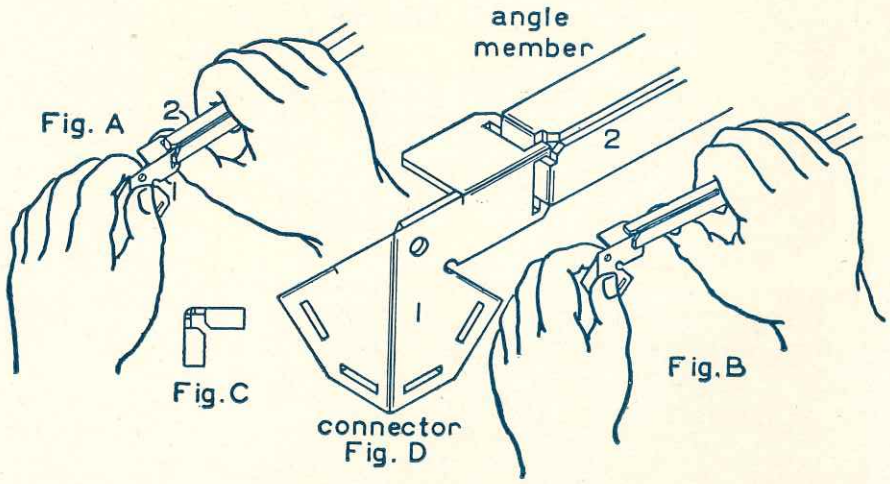
The **MECCANO-MORECRAFT** outfit you now have gives you a chance to do all this and more, too; for **MORECRAFT**, in magic manner, equips you to do your own reproducing, inventing, and creating. Want to start right away? Good! Here's how to do it:

*FIRST: Get acquainted with the new **MORECRAFT** BOLTLESS JOINT. Its business is to join parts without the use of nuts, bolts, rivets, nails, or rods. Try attaching and detaching the angle members or girders to the different connections or gussets; and learn how to adjust the ends of the angle-member to form a perfect joint. The illustration to the right shows you how. You will find yourself putting **MORECRAFT** together and taking it apart in an astonishingly short time. In the smaller sets of **MECCANO-MORECRAFT**, there are no nuts and bolts at all; yet you can build all the models shown for these sets in the MANUAL OF INSTRUCTIONS and many others you will think of yourself. With the larger sets, even, you will find you need very few nuts and bolts. Notice that the individual **MORECRAFT** joints are designed to be slightly flexible but that the completed structure is surprisingly rigid and strong.

SECOND: Study the pictures of the parts and the "CONSTRUCTION DETAILS" at the end of this manual. Engineers, Architects, and Educators all agree that the careful planning of **MORECRAFT parts allows a larger number of different combinations with a smaller number of parts, and permits diagonal bracing, etc. making **MECCANO-MORECRAFT** the ideal construction toy.

***THIRD: Select a model to build, beginning with a simple one. You will find that there is an endless store of enjoyment for **MECCANO-MORECRAFT** builders whether they be boys or girls, young or old. The four-year-old, too young to build from pictures, will connect pieces here and there and discover for himself the principles of structural design. You can build readily, using model pictures in the manual, real models, or your imagination. Grown up boys particularly enjoy building "easy-to-put-together, quick-to-get-apart" structures to support complicated motor driven mechanisms.

****FOURTH: Select your parts and start to build. The manual helps you, in building smaller models, by giving you, near each picture, a list of parts required. For the larger models, a blueprint is provided, in addition to the picture in the manual. This blueprint also includes a "BILL OF MATERIAL" and necessary instruction. The models pictured in the manual are suggestions. They do not begin to exhaust the possibilities of your set. As you use your **MECCANO-MORECRAFT**, new ideas will come to you. You will gradually accumulate so much valuable knowledge of mechanics and engineering that you can develop these ideas and try your hand at inventing.



MORECRAFT BOLTLESS JOINT

The operation of the **MORECRAFT** JOINT is shown in Figs. A and B.

To attach, hold the members as shown in Fig. A with the right thumb under the slots of the connector, 1, and press the angle-member 2, down. The projecting ends of the angle-member will spring apart and enter the slots. The position of the parts for making the connection is shown more clearly in Fig. D. To disconnect, hold the parts with the right thumb under the split end of the angle-member near the connector and pull down on the connector with the left hand. The right thumb will spread the ends of the angle-member and the parts will separate. A slight twisting of the angle-member will assist in disconnecting the members. If properly adjusted, the joint is surprisingly strong and rigid. If it is not, the ends of the angle-member may have become bent. This may be corrected easily by bending the ends of the angle-member until they are in the position shown in Fig. C.

If you have any difficulty building models, if you want to ask questions about **MECCANO-MORECRAFT**, if you want to tell us about any of the discoveries that you make in connection with it, write to us! Meanwhile, happy times to you!

MORECRAFT CONSTRUCTION DETAILS

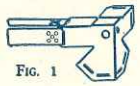


FIG. 1

FIG. 1 shows a C-90-X connected to a single angle-member.

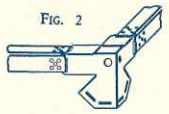


FIG. 2

FIG. 2 shows a second angle-member connected at a 90° angle to the first angle-member.

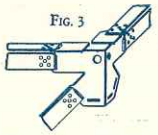


FIG. 3

FIG. 3 shows a third angle-member connected to the same connector at an angle of 45° to the first angle-member.

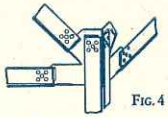


FIG. 4

FIG. 4 shows a fourth angle-member *reverse connected* to the connector C-90-X. This is a detail found in a large number of the MORECRAFT models.

FIG. 5

FIG. 5 shows two angle-members connected to a straight-angle connector C-180-Z. This type of connector is used whenever it is desired to make a long structure. The additional slots of the connector provide for bracing as shown in FIG. 6.

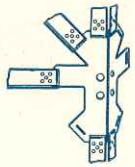


FIG. 6.

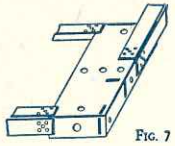


FIG. 7

FIG. 7 shows a *boom end*, C-360. This connector as shown permits connecting angle-members at right angles to the boom.

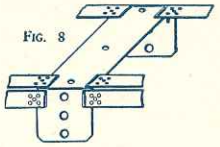


FIG. 8

FIG. 8 shows a *double straight angle connector*, C-180-D, as used to extend the length of a double boom. A similar connector, the C-180-DS, (see MORECRAFT PARTS) is used the same as the connector shown here.

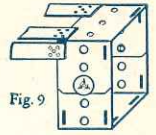


Fig. 9

Fig. 9 shows the use of the C-180-D connector as the pivoted end of a boom. The lower and upper connectors may be pivoted by the *snap rivets* shown or by a rod or bolted as described in FIG. 26.

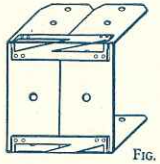


FIG. 10

FIG. 10 shows the use of A-O'S to connect two C-180-D's. Other connections may be similarly connected. See FIG. 11

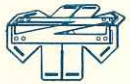


FIG. 11.

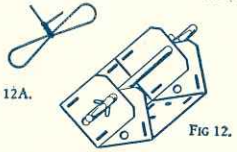


FIG. 12A.

FIG 12.

FIG. 12 shows how to make a clam-shell-bucket for use with your der-ricks, etc., using two C-180-D's. The end of the hoist line may be tied as shown in FIG. 12A and one loop slipped over each end of the rod.

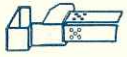


FIG. 13

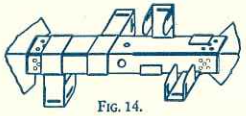


FIG. 14.

FIG. 13 shows the C-O, which is the most useful MORECRAFT connector. FIG. 14 shows a C-O in each of four positions on an angle-member to permit the attachment of an angle-member in each of four directions. The end C-O's prevent the angle-member upon which they are mounted, being detached. FIG. 15 shows how it is possible to locate a shaft rod in any desired position regardless of hole spacings.

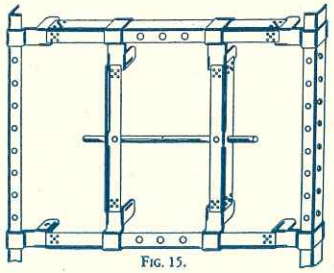


FIG. 15.

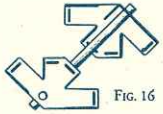


FIG. 16

FIG. 16A

FIGS. 16 and 16A show how to form the hub used in the WHIRLIGIG and CLOTHES REEL models built with the BEGINNER SIZE. Put a rod through the holes in the tops of a pair of C-135-Z connectors. Rotate them into the position shown in FIG. 16. Then force them together as shown in FIG. 16A. Four angle-members may be connected to the two connectors.

FIG. 17

FIG. 17 and FIG. 17A are plan and side views, respectively, of the arrangement for connecting the front axle pivot in the LUMBER TRUCK and WAGON models for the BEGINNER SIZE. The lower end of the rod is inserted between the axle rod and the angle-member of the front truck.

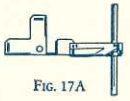


FIG. 17A

FIG. 18

FIG. 18 shows how to connect the upper end of the pivot rod of the model of the STIFF-LEGGED DERRICK shown for the BEGINNER SIZE. An A-O is connected to the corner of the base plate, P-4, under the A-O shown and the lower end of the rod passes between its ends. A wheel should be placed on the rod over each C-O.

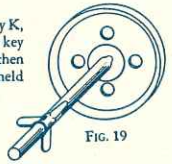


FIG. 19

FIG. 19A

FIGS. 19 and 19A show the use of the MORECRAFT Key K, to fasten a MORECRAFT wheel W-2, to a rod. Place the key upon the rod where it is desired to have the wheel, then slide the wheel over the tongue of the key until it is held firmly in position.

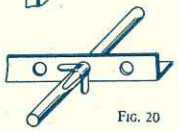


FIG. 20

FIG. 20 shows the use of a key to limit the motion of a rod lengthwise yet permit it to rotate freely.

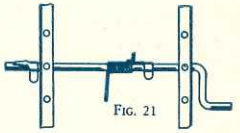


FIG. 21

FIG. 21 shows how to use a key to fasten the end of a string to wind it upon a crank, CH.

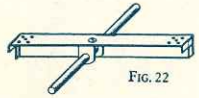


FIG. 22

FIG. 22 shows how to fasten an angle-member to a shaft rod. The screw of a collar is removed and the rod is inserted through the collar and one of a pair of holes of an angle-member. Then the screw is inserted through the other hole in the angle-member and tightened to hold the member in the desired position. A connector may be similarly secured. An example of this use is the HAND CAR built with the DESIGNER SIZE.

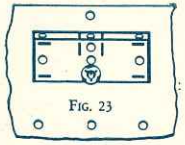


FIG. 23

FIG. 23 shows how to use the snap rivet. The pieces to be joined are placed with holes in alignment and the rivet is inserted with thumb pressure. Use of a single rivet permits a swivel action to be obtained.

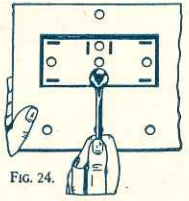


FIG. 24.

FIG. 24 shows the use of the HANDY RIVET EXTRACTOR to remove the rivets

After use snap rivets may become compressed and thus lose their tension. To remedy this, insert the prong of the rivet extractor between the slot portions of the rivet and spread them open as shown in FIG. 25

To lock two nuts in place put them upon a bolt inserted through holes in the members to be joined and turn in opposite directions as shown by the arrows in FIG. 26. This may be done by the use of the two wrenches furnished with all MORECRAFT SETS supplied with nuts and bolts.

FIG. 26.

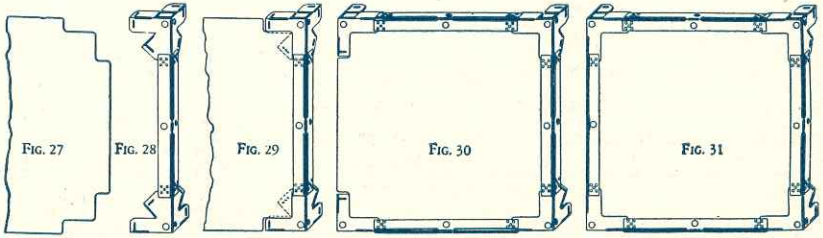


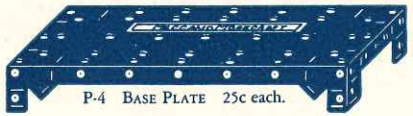
FIG. 27 FIG. 28 FIG. 29 FIG. 30 FIG. 31

The above FIGS. show how to use the MORECRAFT PANEL INSERT. The corners are to be placed on top of the connectors and the sides are to be below the angle-members. First, place the panel shown in FIG. 27, with the assembly shown in FIG. 28, as shown in FIG. 29, then add the parts shown in FIG. 30, and, last, complete by connecting the left-hand corners with an angle-member.

MORECRAFT SEPARATE PARTS

CONNECTORS

C-90-X 5c each. C-180-Z 10c each C-135-ZL C-135-ZR 15c per pair. C-O 2 for 5c.



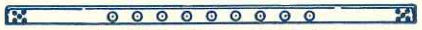
P-4 Base Plate 25c each.

CONNECTORS

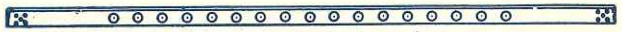
C-180-D 5c each C-180-DS 5c each C-360 5c each

A-0, 35c per doz. A-1 Angle-member 40c per doz. A-2 Angle-member 45c per doz.

ANGLE-MEMBERS



A-3 Angle-member 50c per doz.



A-4 Angle-member 60c per doz.

ST-5 10c per doz. ST-7 10c per doz. ST-11 15c per doz. ST-21 21-hole Strip 20c per doz.

Note: The number of holes in the angle-members shown in the pictures of the Morecraft models may be different from those shown above. If the model shows 3 holes, the member is an A-2; and if it shows 5 holes, it may be either an A-2 or an A-3.

PANELS

P-02 20c per doz. P-11 20c per doz. P-12 25c per doz. P-13 30c per doz. PT-11 20c per doz.

W 5c per doz. N-1 5c per doz. S-1 10c per doz. S-2 15c per doz. S-3 20c per doz.

Snap Rivet

SN 10c per doz.

Hook

A-F 15c per doz.

Key

K 25c per doz.

Collar

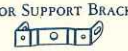
S-4 25c per doz.

Angle Brackets

B-2 2c each

B-1 10c per doz.

Motor Support Bracket



B-3 5c each

Eccentric

CR 10c each

GEARS PULLEYS AND WHEELS

Motor Pulley

W-0 10c each

Sheave Pulley

W-1 5c each

Pulley

W-2 2 for 15c

Pierced Disc

PD-1 10c each

Pulley

W-25 10c each

W-3 3" Pulley 25c ea

PD-2 Turret Plate 15c ea

36 Tooth Gear

G-3 20c each

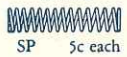
18 Tooth Gear

G-2 15c each

Pinion

G-1 10c each

Spring

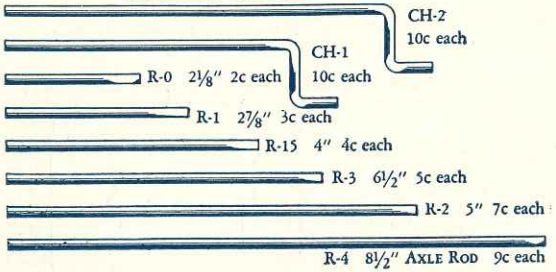


SP 5c each

Worm Gear

WG 20c each

RODS AND CRANKS



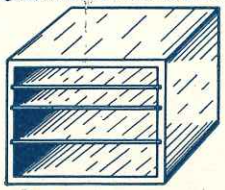
CH-2 10c each
CH-1 10c each
R-0 2⅛" 2c each
R-1 2⅞" 3c each
R-15 4" 4c each
R-3 6½" 5c each
R-2 5" 7c each
R-4 8½" Axle Rod 9c each

Screw Driver 5c each

Wrench 5c each

Rivet Extractor 5c each

Graduate Size Wooden Cabinet



C-G $1.50 each

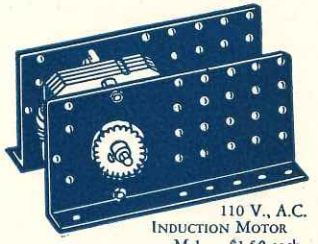
2" Metal Drawer

D-1 85c each

1" Metal Drawer

D-½ 65c each

M-2 Universal Motor $2.95 each

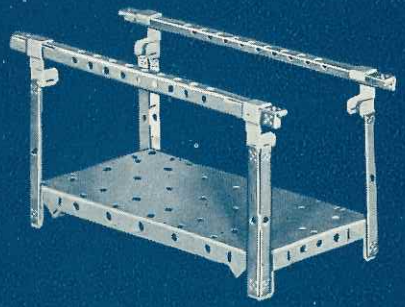


110 V., A.C. Induction Motor M-1 $1.50 each

Many dealers carry Separate Morecraft Parts. If your dealer cannot supply you, send check, money order, or stamps for the parts you want and we will send your order to you postpaid.

MECCANO COMPANY OF AMERICA
NEW HAVEN, CONN., U. S. A.

Models built with the *Beginner Size*



PARALLEL BARS
For Your Toy Playground

Parts required

PARALLEL BARS	
P-4	1
A-1	4
A-3	2
C-0	4

BAGGAGE TRUCK	
P-4	1
A-0	2
A-1	4
C-90-X	4
W-2	4
R-2	2
R-4	1
K	4

(Rubber Band—Not Supplied)

Put a rubber band several times around the end of the tongue before inserting it into the hole in the P-4.

SAND SIFTER	
P-4	1
A-0	1
A-2	2
C-135-ZR	1
C-135-ZL	1

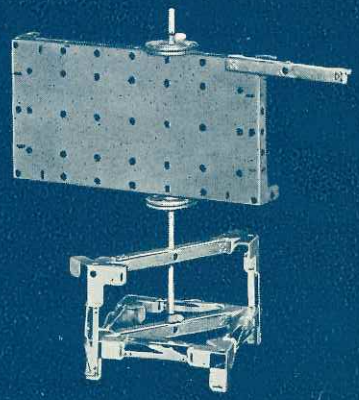
WEATHER VANE	
P-4	1
A-0	6
A-1	3
C-90-X	4
C-135-ZR	1
C-135-ZL	1
R-4	1
W-2	2
K	3

STIFF LEGGED DERRICK

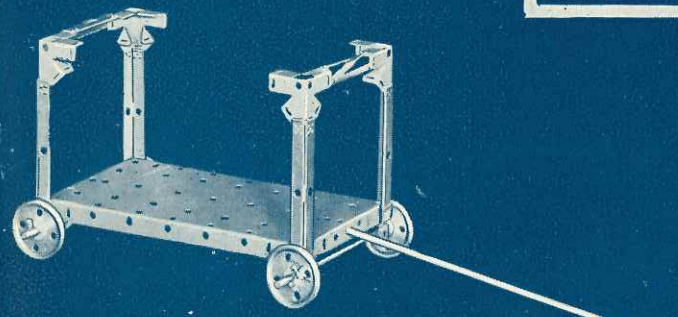
The boom will swing all over your block building. The vertical rod is held top and bottom between the ends of A-0's, reverse connected to the corner of the P-4 and the top C-90-X. See the "Construction Details".

P-4	1	C-135-ZR	1
A-0	6	C-135-ZL	1
A-1	3	W-2	4
A-2	2	R-4	1
A-3	2	CH-1	1
C-0	3	K	3
C-90-X	4	AF	1

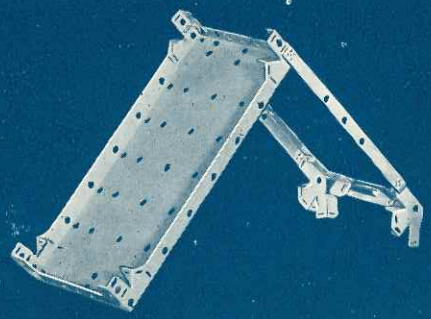
(String—Not Supplied)



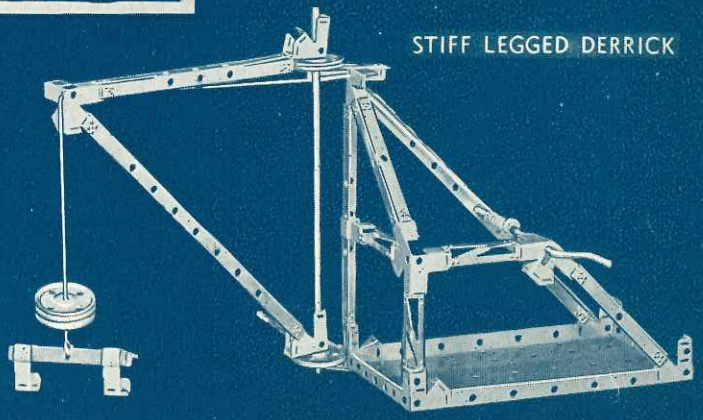
WEATHER VANE
The Finger Will Point to the Direction from Which the Wind Is Blowing



BAGGAGE TRUCK

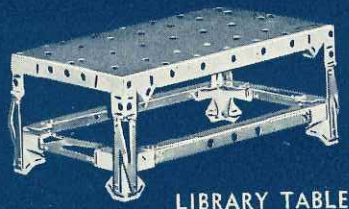


SAND SIFTER

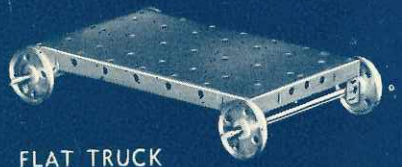


STIFF LEGGED DERRICK

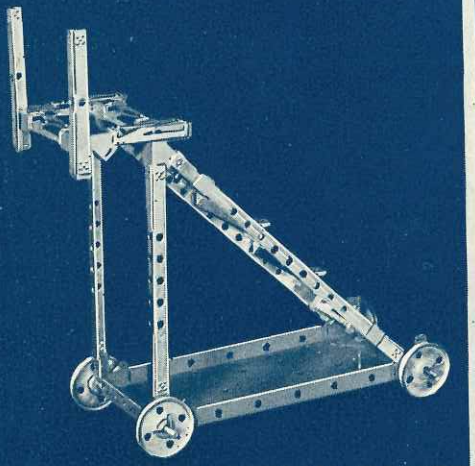
Models built with the *Beginner Size*



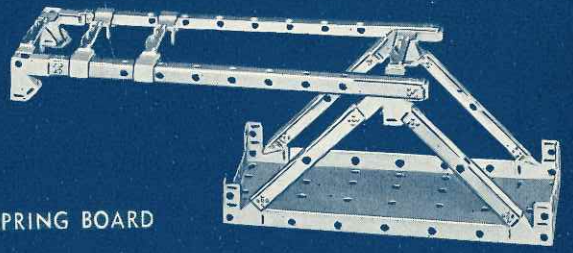
LIBRARY TABLE



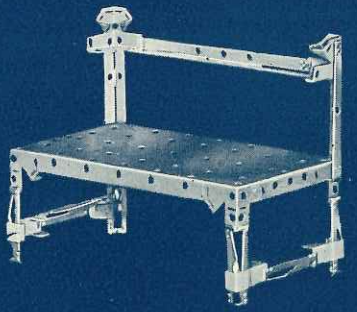
FLAT TRUCK



TROLLEY REPAIR TRUCK



SPRING BOARD



PARK BENCH

Parts required

LIBRARY TABLE	
P-4	1
A-0	6
A-2	2
C-90-X	4

SPRING BOARD	
P-4	1
A-0	4
A-1	4
A-3	2
C-0	4
C-90-X	4

PARK BENCH	
P-4	1
A-0	6
A-1	2
A-2	1
C-0	4
C-90-X	2

FLAT TRUCK

P-4	1
W-2	4
R-2	2
K	4

TROLLEY REPAIR TRUCK

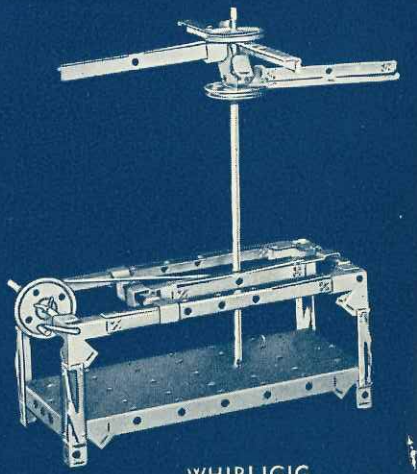
P-4	1	C-0	4
A-0	6	C-90-X	4
A-1	4	W-2	4
A-2	2	R-2	2
A-3	2	K	4

WHIRLIGIG

Note: For the construction of the hub of the whirligig see the construction details in the back part of this manual.

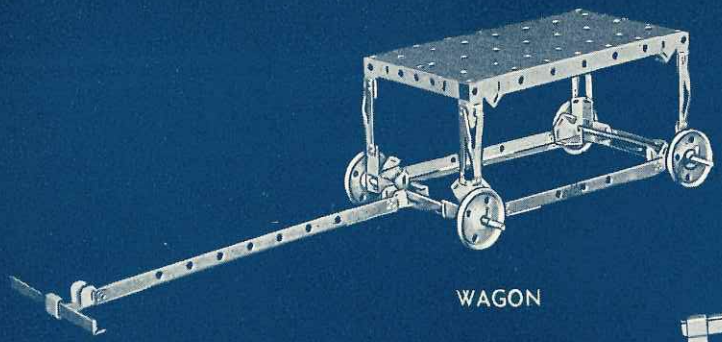
P-4	1	C-135-ZR	1
A-0	6	C-135-ZL	1
A-1	3	W-2	3
A-2	2	R-4	1
A-3	1	CH	1
C-0	4	K	4
C-90-X	4		

(Rubber Band—Not Supplied)

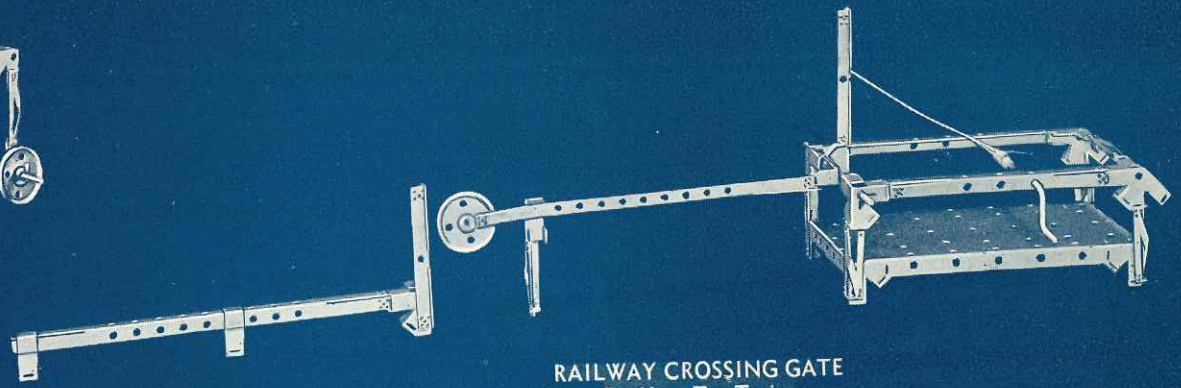


WHIRLIGIG
Illustrates the Transmission of Circular Motion

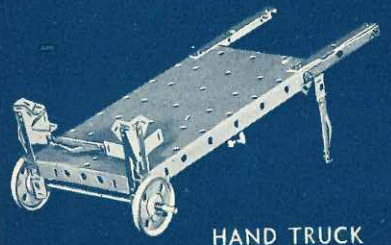
Models built with the *Beginner Size*



WAGON



RAILWAY CROSSING GATE
For Your Toy Trains



HAND TRUCK

FOOT BRIDGE
(Just Right for Your Toy Soldiers)

Parts required

WAGON	
P-4	1
A-0	6
A-1	1
A-2	2
A-3	1
C-0	2
C-90-X	4
W-2	4
R-2	2
K	4

HAND TRUCK	
P-4	1
A-0	5
A-1	2
C-90-X	2
W-2	2
R-2	1
K	2

RAILWAY CROSSING GATE			
P-4	1	C-135-ZR	1
A-0	6	C-135-ZL	1
A-1	2	W-2	1
A-2	2	R-2	1
A-3	2	CH-1	1
C-0	3	K	4
C-90-X	4		

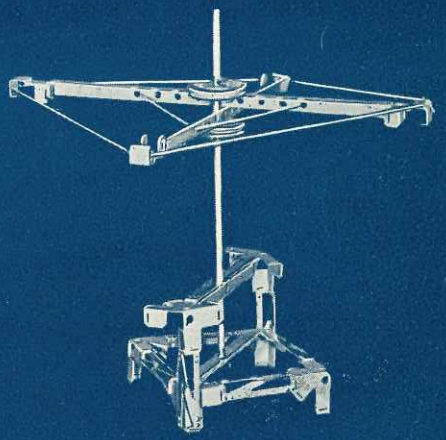
(String—Not Supplied)

Note: Spring apart the ends of the gate and press together over the W-2.

FOOT BRIDGE	
P-4	1
A-0	5
A-1	4
C-90-X	2

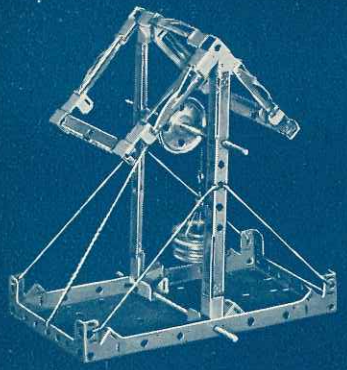
CLOTHES REEL	
A-0	6
A-1	2
A-3	2
C-0	4
C-90-X	4
C-135-ZL	1
C-135-ZR	1
W-2	2
R-4	1
K	3

(String — Not Supplied)

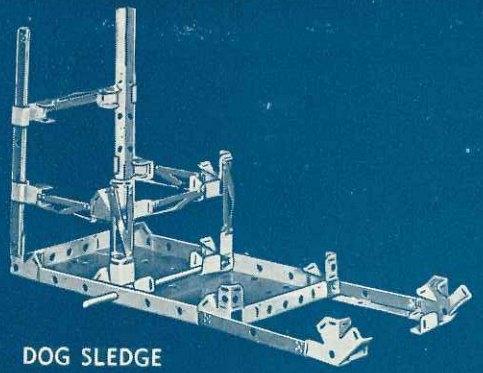


CLOTHES REEL

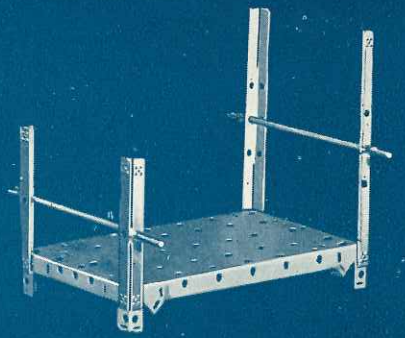
Models built with the *Beginner Size*



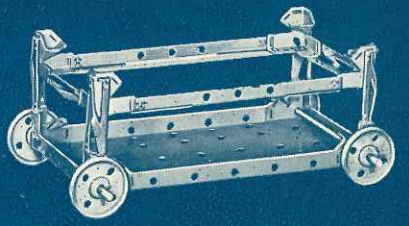
WELL
The Open Country Kind



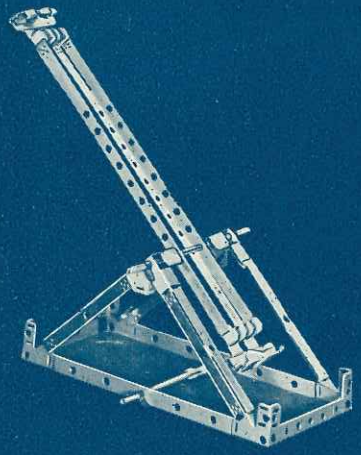
DOG SLEDGE



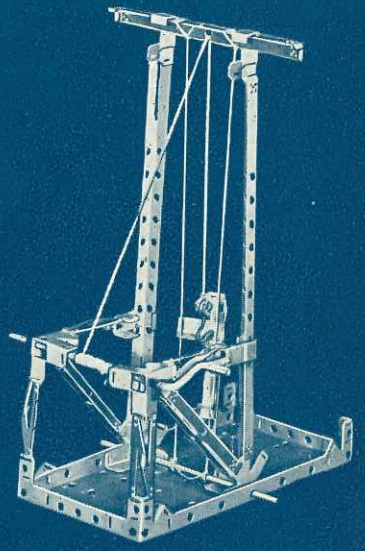
FOUR POSTER BED



PACKAGE TRUCK



CATAPAULT



BUILDERS' HOIST
Used to Hoist Materials in Buildings During Construction

Parts required

WELL		DOG SLEDGE	
P-4	1	P-4	1
A-0	5	A-0	6
A-1	2	A-1	2
A-2	2	A-2	2
C-0	4	C-0	4
C-90-X	4	C-90-X	4
W-2	4	C-135-ZR	1
R-2	2	C-135-ZL	1
K	3	K	2
AF	1	R-2	1

(String—Not Supplied)

FOUR POSTER BED	
P-4	1
A-1	2
A-2	2
R-4	2
K	4

PACKAGE TRUCK	
P-4	1
A-0	6
A-2	2
C-90-X	4
W-2	4
R-2	2
K	4

CATAPAULT

Place a wad of paper on the upper end of the arm, pull back and release. Wad may be accurately thrown.

P-4	1	C-0	4
A-0	2	C-90-X	2
A-1	4	R-2	2
A-3	2	K	4

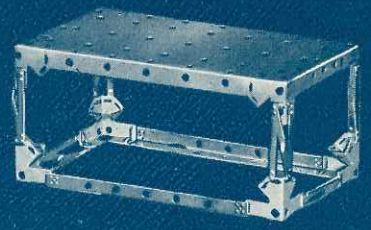
(Rubber Band—Not Supplied)

BUILDERS' HOIST

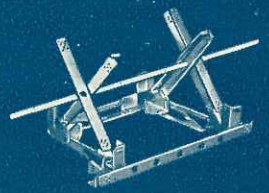
Note: This model illustrates the conversion of circular motion into straight motion.

P-4	1	C-135-ZR	1
A-0	4	C-135-ZL	1
A-1	3	R-2	1
A-2	1	C-H	1
A-3	2	AF	1
C-0	4	K	2
C-90-X	4	(String—Not Supplied)	

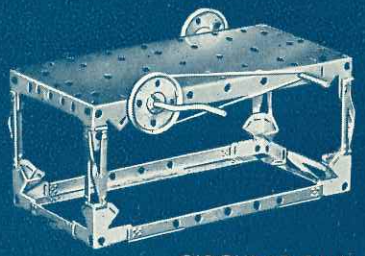
Models built with the *Beginner Size*



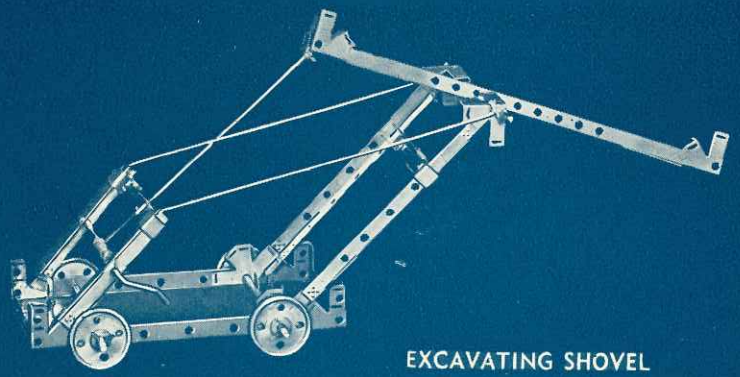
TABLE



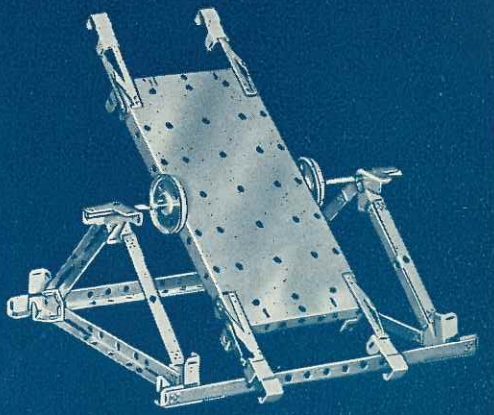
SAW-BUCK
Used to Saw Up Fire Wood



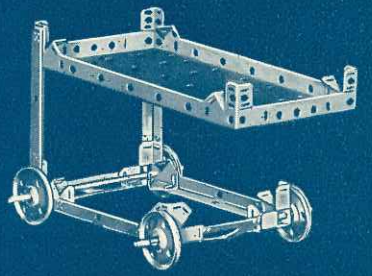
CIRCULAR SAW
As Found in Any Large Woodworking Shop



EXCAVATING SHOVEL



SEE SAW



BEDSIDE TABLE

Parts required

TABLE	
P-4	1
A-0	6
A-2	2
C-90-X	4

SAW-BUCK	
C-90-X	4
A-0	3
A-1	4
A-2	1
R-4	1

CIRCULAR SAW	
P-4	1
A-0	6
A-2	2
C-90-X	4
W-2	2
R-2	1
C-H	1
K	3

(Rubber Band—Not Supplied)

EXCAVATING SHOVEL	
P-4	1
A-0	2
A-1	2
A-2	2
A-3	1
C-0	4
C-90-X	4
C-135-ZR	1
C-135-ZL	1
W-2	4
R-2	2
R-4	1
CH-1	1
K	4

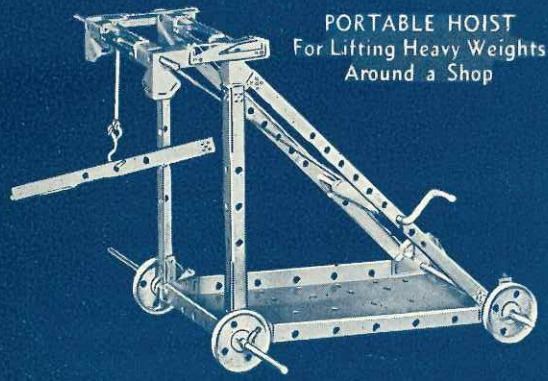
(String—Not Supplied)

Note: The Circular Saw, shown to the left, illustrates the transmission of circular motion.

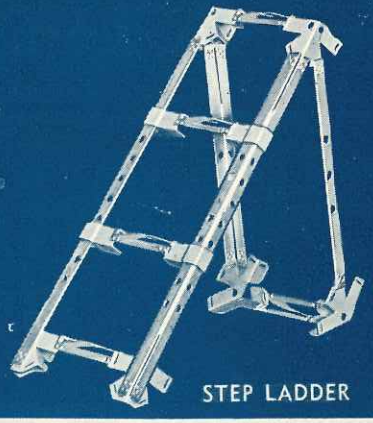
SEE SAW	
P-4	1
A-0	4
A-1	4
A-2	2
A-3	2
C-0	4
C-90-X	4
C-135-ZR	1
C-135-ZL	1
W-2	2
R-4	1
K	4

BEDSIDE TABLE	
P-4	1
A-0	2
A-1	4
C-90-X	4
W-2	4
R-2	2
K	4

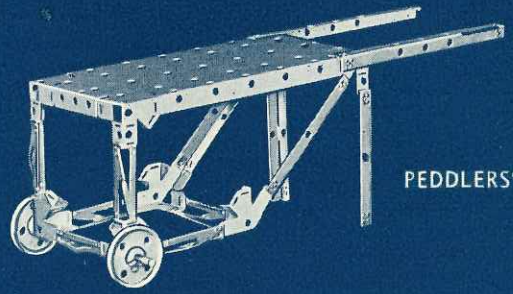
Models built with the *Beginner Size*



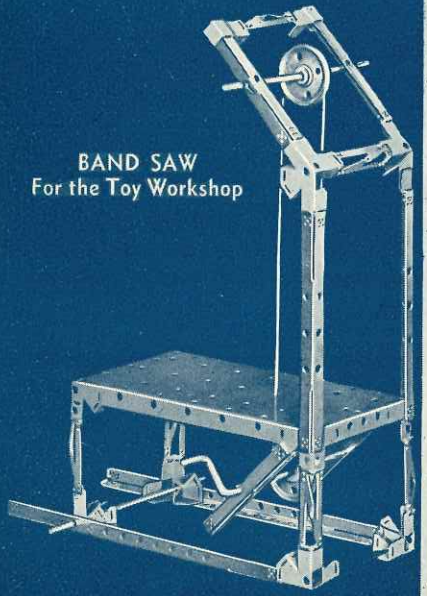
PORTABLE HOIST
For Lifting Heavy Weights
Around a Shop



STEP LADDER



PEDDLERS' CART



BAND SAW
For the Toy Workshop

Parts required

PORTABLE HOIST		STEP LADDER	
P-4	1	A-0	5
A-0	4	A-2	2
A-2	3	A-3	2
A-3	2	C-0	4
C-90-X	4	C-90-X	4
R-2	2	C-135-ZR	1
R-4	1	C-135-ZL	1
W-2	4		
C-H	1		
K	4		
AF	1		

(String—Not Supplied)

BAND SAW			
P-4	1	C-135-ZR	1
A-0	6	C-135-ZL	1
A-1	4	W-2	2
A-2	2	R-2	2
A-3	2	C-H	1
C-0	2	K	4
C-90-X	4		

(String—Not Supplied)

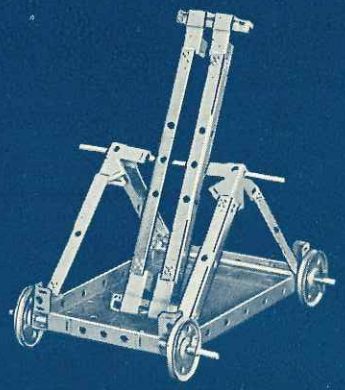
PEDDLERS' CART			
P-4	1	C-135-ZR	1
A-0	6	C-135-Z L	1
A-1	4	W-2	2
A-2	2	R-2	2
C-90-X	1	K	2

SLED			
P-4	1	C-90-X	2
A-0	4	C-135-ZR	1
A-3	2	C-135-ZL	1

The runners are fastened together front and rear and the P-4 simply rests within them.

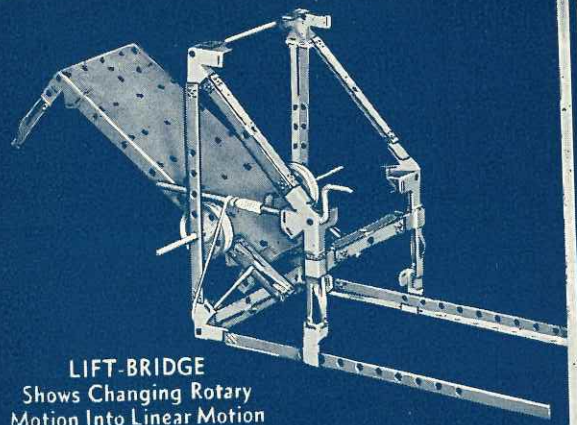
HAND CAR			
P-4	1	C-90-X	2
A-0	2	R-2	2
A-1	4	R-4	1
A-2	2	W-2	4
C-0	4	K	4

SLED



HAND CAR

Models built with the *Beginner Size*



LIFT-BRIDGE
Shows Changing Rotary Motion Into Linear Motion and Changing Back Into Rotary Motion

Parts required

LIFT-BRIDGE

P-4	1	C-135-ZR	1
A-0	6	C-135-ZL	1
A-1	4	W-2	4
A-2	2	R-2	1
A-3	2	R-4	1
C-0	4	CH-1	1
C-90-X	4	K	4

(String—Not Supplied)

APOTHECARIES' SCALES

P-4	1
A-0	2
A-1	2
A-2	2
A-3	2
C-0	4
C-90-X	4
C-135-ZR	1
W-2	2
R-2	2
K	4

BED WITH CANOPY

P-4	1
A-0	4
A-1	2
A-2	2
C-90-X	4
R-2	2
K	4

WAREHOUSE CRANE

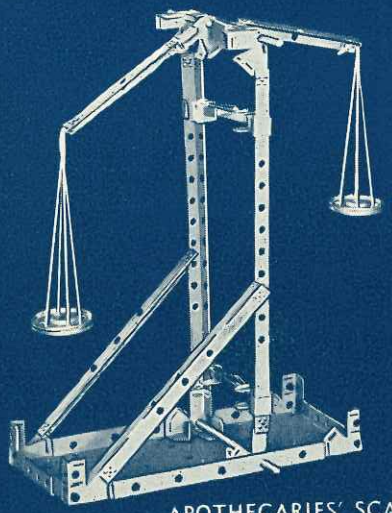
P-4	1	C-135-ZL	1
A-0	3	R-2	1
A-1	3	CH-1	1
A-2	2	W-2	4
A-3	2	AF	1
C-90-X	4	K	4
C-135-ZR	1		

(String—Not Supplied)

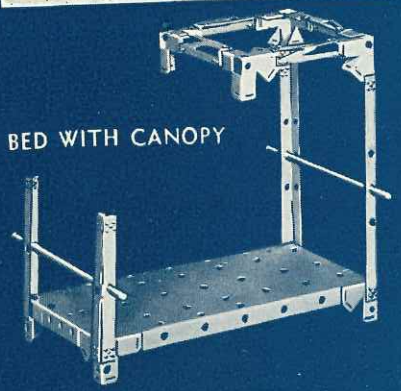
LUMBER TRUCK

A-0	4	C-135-ZR	1
A-1	2	C-135-ZL	1
A-2	2	W-2	4
A-3	2	R-0	1
C-0	2	R-2	2
C-90-X	4	K	4

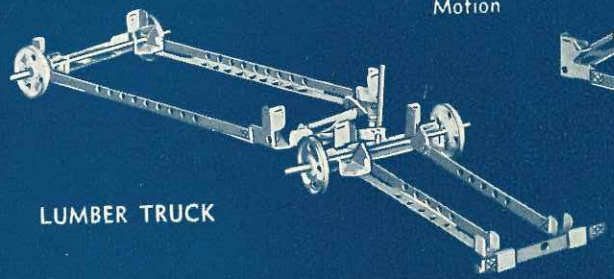
Note: The ends of the two A-0's, connected to the C-135's, are crossed and the end of the R-0 is inserted in a vertical position as shown through their slightly spread ends and between the R-2 and the A-1 of the front truck. See the Construction Details at the end of this Manual.



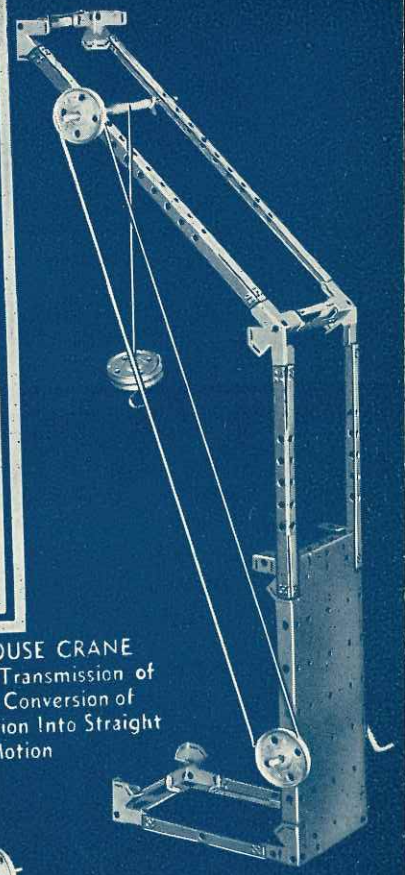
APOTHECARIES' SCALES
Used by the Druggist for Prescriptions



BED WITH CANOPY
Used by Kings and Queens



LUMBER TRUCK



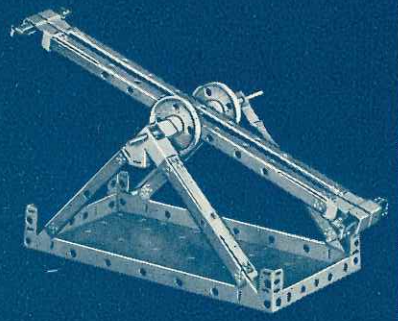
WARE-HOUSE CRANE
Shows Belt Transmission of Power and Conversion of Circular Motion Into Straight Motion

Models built with the *Beginner Size*

Parts required

TEETER

P-4	1
A-0	2
A-1	4
A-3	2
C-0	4
C-90-X	2
R-2	1
W-2	2



TEETER

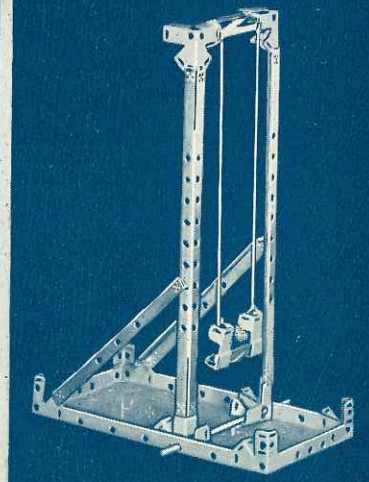
PLAYGROUND SLIDE

P-4	1
A-0	5
A-1	2
C-0	4
C-90-X	2

ROPE SWING

P-4	1
A-0	2
A-2	2
A-3	2
C-0	2
C-90-X	4
R-2	1

(String—Not Supplied)

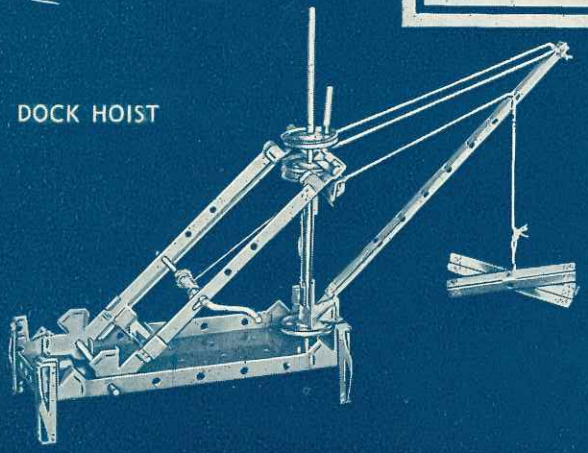


ROPE SWING
(For Your Toy Playground)

DOCK HOIST

P-4	1	C-135-ZL	1
A-0	6	W-2	4
A-1	3	R-0	1
A-2	2	R-2	1
A-3	1	R-4	1
C-0	4	CH-1	1
C-90-X	2	AF	1
C-135-ZR	1	K	4

(String–Not Supplied)

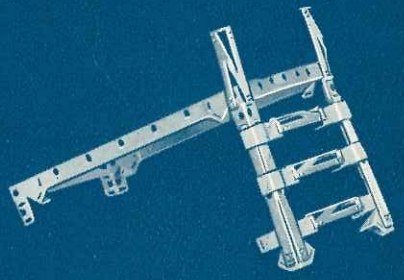


DOCK HOIST

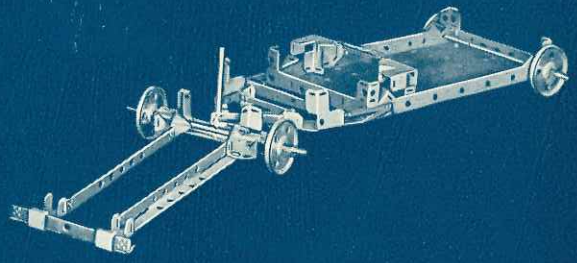
WAGON

P-4	1	C-135-ZR	1
A-0	6	C-135-ZL	1
A-1	3	W-2	4
A-2	2	R-0	1
C-0	2	R-2	2
C-90-X	4	K	4

Note: The ends of the two A-0's, connected to the C-135's, are crossed and the end of the R-0 is inserted in a vertical position as shown through their slightly spread ends and between the R-2 and the A-1 of the front truck. The seat and foot rest are simply laid in the positions shown. See the Construction Details at the end of this Manual.

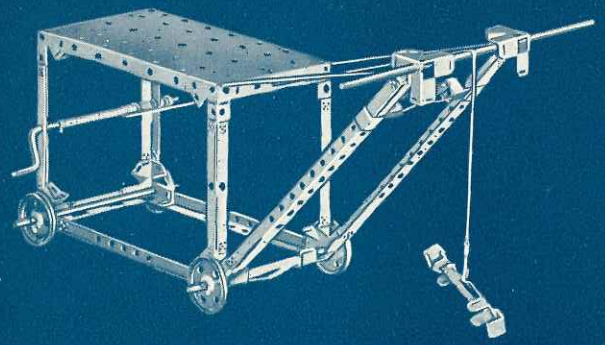


PLAYGROUND SLIDE

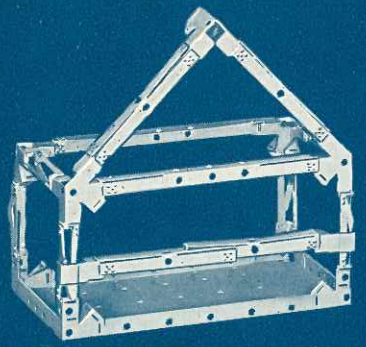


WAGON
Front Wheels Steer as in a Real Wagon

Models built with the *Beginner Size*

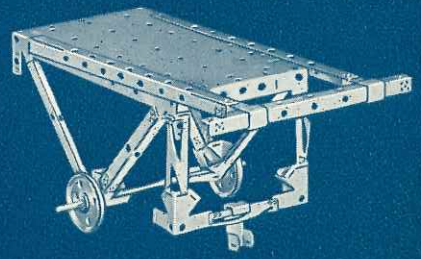


PORTABLE CRANE
For Lifting Heavy Weights, as in Ship Yards

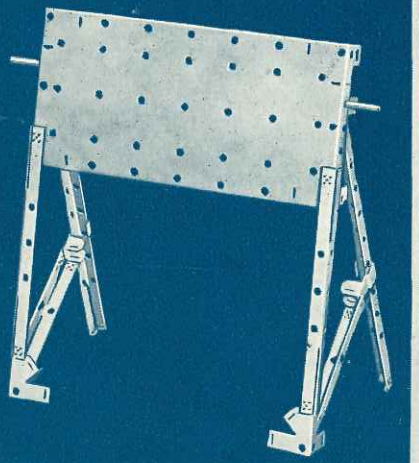


HOT DOG STAND
(Probably Has Ice Cream Cones Also)

TREE



TEA WAGON



BLACKBOARD

Parts required

PORTABLE CRANE	
P-4	1
A-0	4
A-1	4
A-2	2
A-3	2
C-0	4
C-90-X	4
C-135-ZR	1
C-135-ZL	1
C-H	1
R-2	2
R-4	1
K	4
W-2	4
AF	1

(String—Not Supplied)

HOT DOG STAND	
P-4	1
A-0	6
A-1	4
A-2	2
C-0	2
C-90-X	3
C-135-ZR	1
C-135-ZL	1

BLACKBOARD	
P-4	1
A-1	2
A-2	2
A-3	2
C-0	2
C-90-X	4
R-4	1

The Rod Holds Two C-90-X's in Place Behind the P-4.

TREE	
A-0	4
A-2	1
C-90-X	2

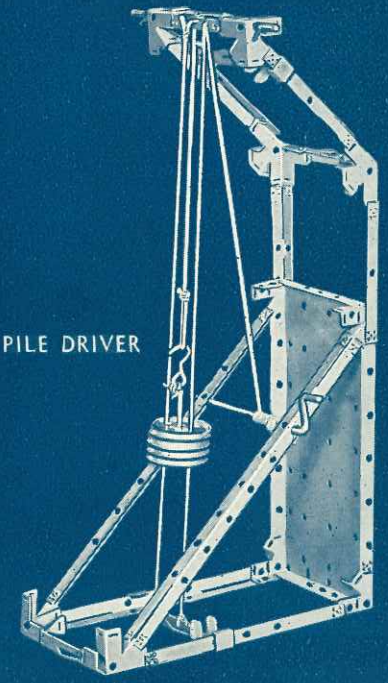
TEA WAGON	
P-4	1
A-0	3
A-1	4
A-2	1
A-3	2
C-0	3
C-90-X	4
W-2	2
R-2	1
K	2

PILE DRIVER

When the Hammer Is Up Unhook and Let It Drop.

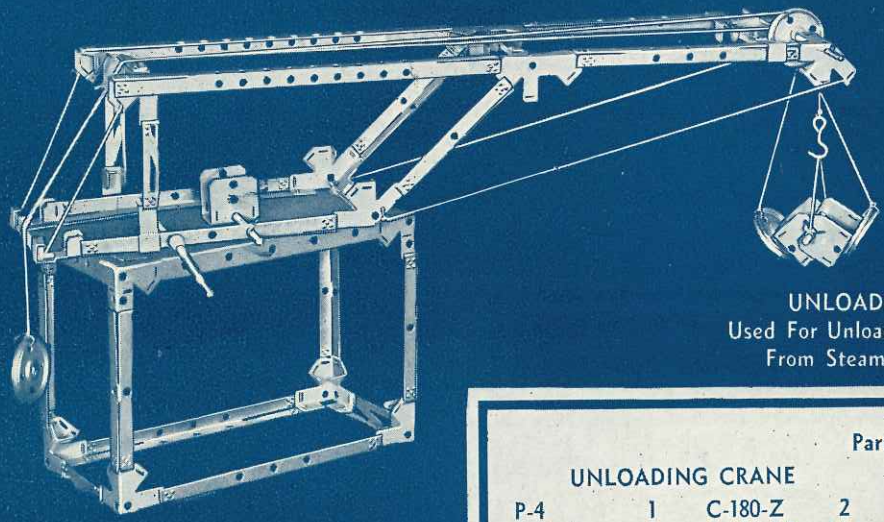
P-4	1	C-135-ZR	1
A-0	5	C-135-ZL	1
A-1	4	W-2	4
A-2	2	R-2	1
A-3	2	C-H	1
C-0	4	K	4
C-90-X	4	AF	1

(String—Not Supplied)

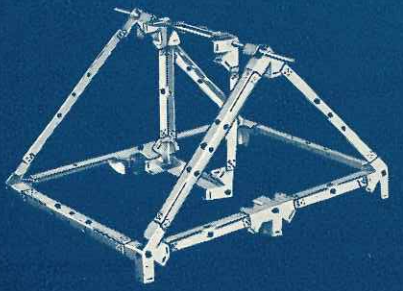


PILE DRIVER

Models built with the *Craftsman Size*

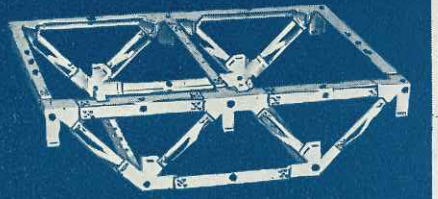


UNLOADING CRANE
Used For Unloading Grain or Coal
From Steamers and Barges



PLAYGROUND SWING

STEEL SCOW OR
INVERTED BRIDGE TRUSS



Parts required

UNLOADING CRANE

P-4	1	C-180-Z	2
A-0	8	C-180-DS	3
A-1	7	W-2	4
A-2	6	R-0	1
A-3	2	R-2	2
C-0	6	CH-1	1
C-90-X	6	AF	1
C-135-ZL	2	K	6
C-135-ZR	2	SN	3

String—Not Included

Note: The C-180-DS is pivoted to the base plate P-4 by a snap rivet SN. The wheels W-2 are fastened to the C-180 DS by snap rivets. See Construction Details to make the clam shell bucket.

STEEL SCOW

A-0	8	C-135-ZL	2
A-1	6	C-135-ZR	2
A-2	5	C-180-Z	2
C-90-X	4		

PLAYGROUND SWING

A-0	2	C-135-ZL	2
A-1	6	C-135-ZR	2
A-2	6	C-180-Z	2
C-90-X	6	R-4	1

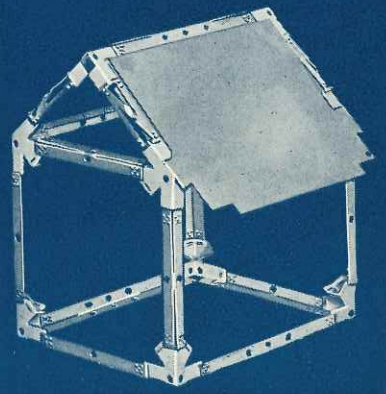
The Craftsman Size MORECRAFT gives you 5 new parts. First there are two new connection members, the C-180-Z and the C-180-DS. Next there is a very useful pulley sheave, W-1. Then there is a new fastening member, the snap rivet; SN by means of which members may be connected through their holes. These rivets are very useful in forming a pivoted joint. The last new element is the special panel insert, by the means of which you may fill in surfaces of your structures to improve their appearance.

Learn all these new parts and their uses from the pictures given at the end of the Manual.

SUMMER HOUSE

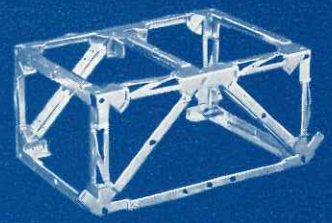
A-0	4	C-135-ZL	2
A-1	8	C-135-ZR	2
A-2	5	P-12	2
C-90-X	6		

This is the first model to show the use of the panel inserts. See the Construction Details at the end of this Manual.



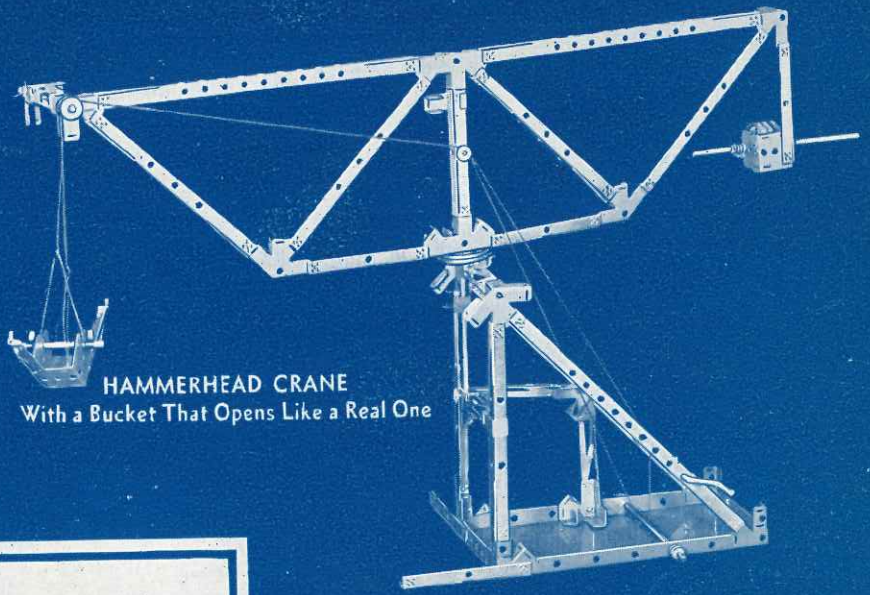
SUMMER HOUSE
Of Modern All Metal Construction

Models built with the *Craftsman Size*



WORK BENCH

HORSE SULKY



HAMMERHEAD CRANE
With a Bucket That Opens Like a Real One

Parts required

HORSE SULKY

A-0	6	C-135-ZR	2
A-1	7	C-135-ZL	2
A-3	2	R-4	1
C-0	2	W-2	2
C-90-X	2	K	2

WORK BENCH

A-0	8	C-135-ZR	1
A-1	8	C-135-ZL	1
A-2	1	C-180-Z	2
C-90-X	6		

HAMMER HEAD CRANE

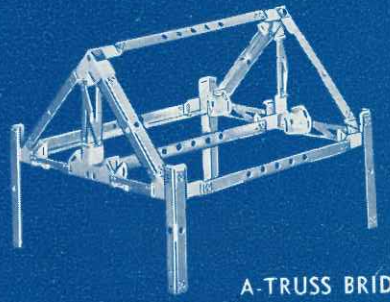
P-4	1	C-180-DS	3
A-0	7	R-0	1
A-1	6	R-2	3
A-2	6	R-4	1
A-3	4	CH-1	1
C-0	2	W-1	1
C-90-X	6	W-2	4
C-135-ZR	2	K	6
C-135-ZL	2	SN	4
C-180-Z	2		

String and Rubber Bands—Not Supplied

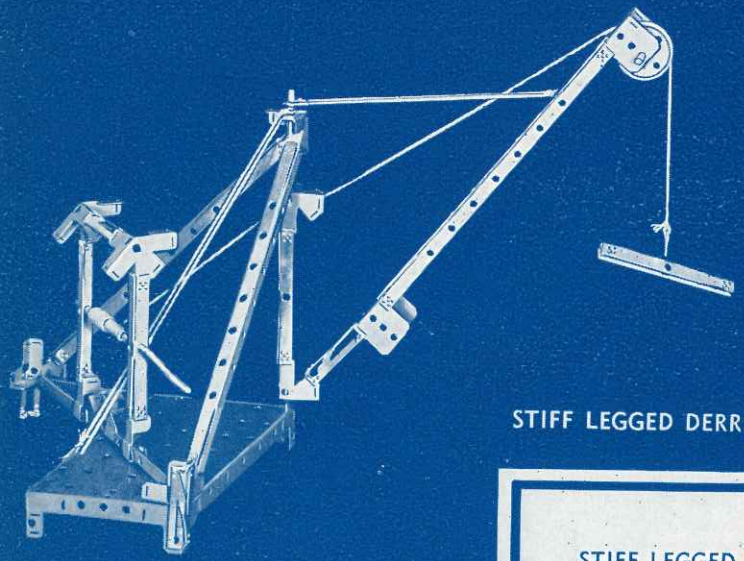
NOTE: To make the bracket see Construction Details. Both the hoist line and the release line should be wound on the crank.

A BRIDGE TRUSS

A-0	6	C-90-X	6
A-1	8	C-180-Z	2
A-2	4		

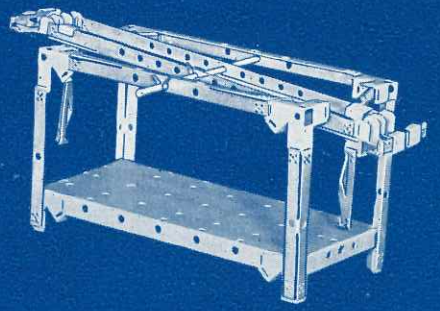


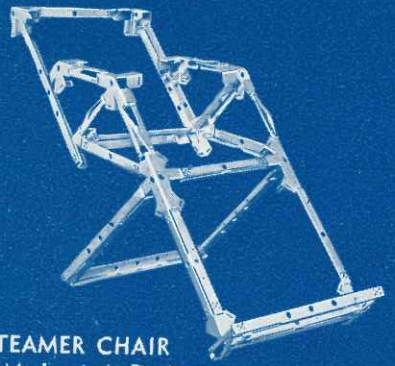
A-TRUSS BRIDGE



STIFF LEGGED DERRICK

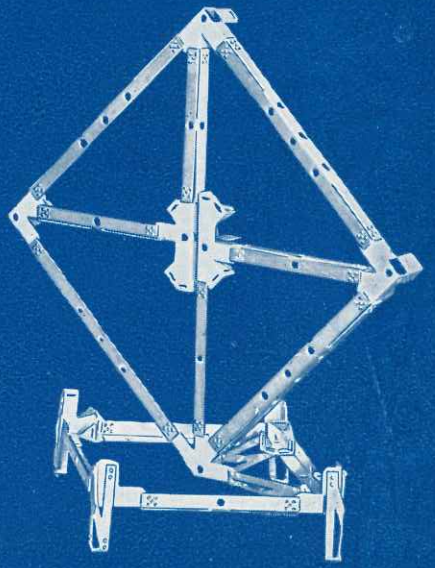
PHARMACISTS' BALANCE
You May Actually Compare Weights With This





STEAMER CHAIR
New Modernistic Design

RADIO RECEIVING LOOP



Parts required

STIFF LEGGED DERRICK

P-4	1	C-180-Z	1
A-0	6	C-180-DS	2
A-1	6	AF	1
A-3	4	W-2	1
C-0	2	R-0	1
C-90-X	5	R-4	1
C-135-ZR	1	CH-1	1
C-135-ZL	1	K	4

String—Not Supplied

NOTE: The boom is double. Place a wheel on the vertical shaft rod between the boom pivot and the base plate and another at the top to fasten the guy line to.

PHARMACISTS' BALANCE

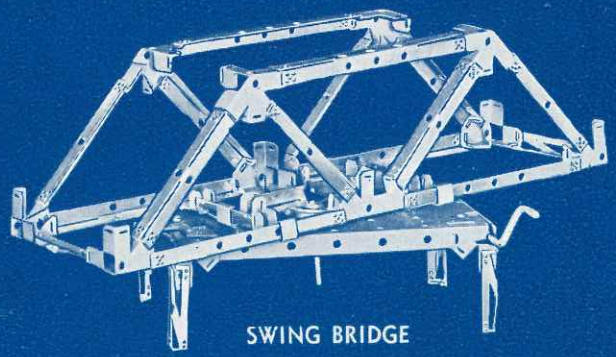
P-4	1	C-0	4
A-0	4	C-90-X	4
A-1	4	R-2	1
A-2	2	K	2
A-3	2		

STEAMER CHAIR

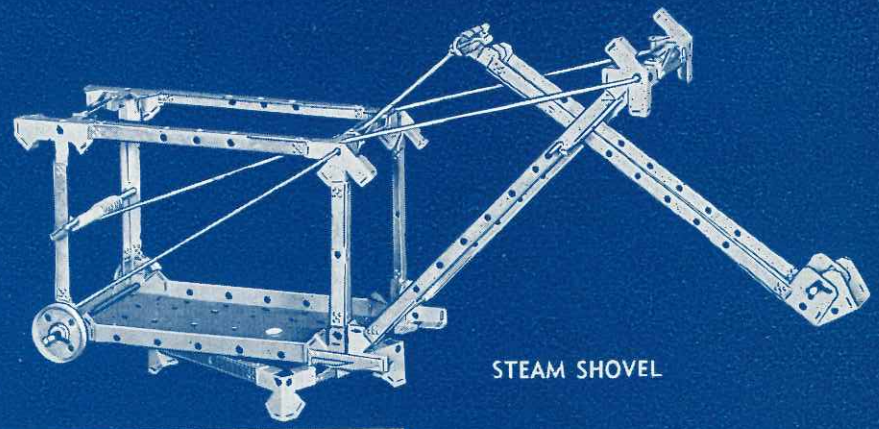
A-0	8	C-135-ZR	2
A-1	8	C-135-ZL	2
A-2	6	C-180-Z	2
C-90-X	6		

RADIO RECEIVING LOOP

A-0	6	C-135-ZR	1
A-1	8	C-135-ZL	1
A-2	4	C-180-Z	2
C-90-X	6		

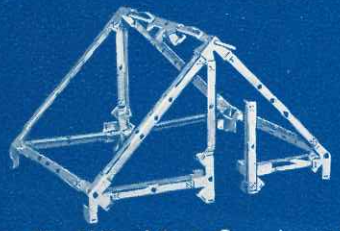


SWING BRIDGE



STEAM SHOVEL

TENT FRAME



How Would You Like to Camp in one Like This?

STEP LADDER

Parts required

SWING BRIDGE

P-4	1	C-135-ZL	2
A-0	8	C-180-Z	2
A-1	9	W-2	2
A-2	6	R-0	1
C-0	6	CH-1	1
C-90-X	4	K	4
C-135-ZR	2		

Rubber Band—Not Supplied

NOTE: Key a wheel to the lower end of the rod. Pass rod through center hole of the base plate and place wheel on top of plate. Place bridge span over rod and put second key on top end of rod inside the A-1. Rubber band passes around CH and the lower wheel.

TENT FRAME

A-0	3
A-1	6
A-2	6
C-90-X	5
C-135-ZR	2
C-135-ZL	2
C-180	2
R-4	1

STEP LADDER

A-0	6
A-1	7
A-2	5
C-90-X	6
C-135-ZR	2
C-135-ZL	2
C-180	2
R-4	1

STEAM SHOVEL

P-4	1	C-180-Z	2
A-0	8	C-180-DS	2
A-1	7	R-0	1
A-2	4	R-2	2
A-3	2	CH-1	1
C-0	4	K	6
C-90-X	6	W-2	2
C-135-ZR	2	SN	1
C-135-ZL	2		

String—Not Supplied

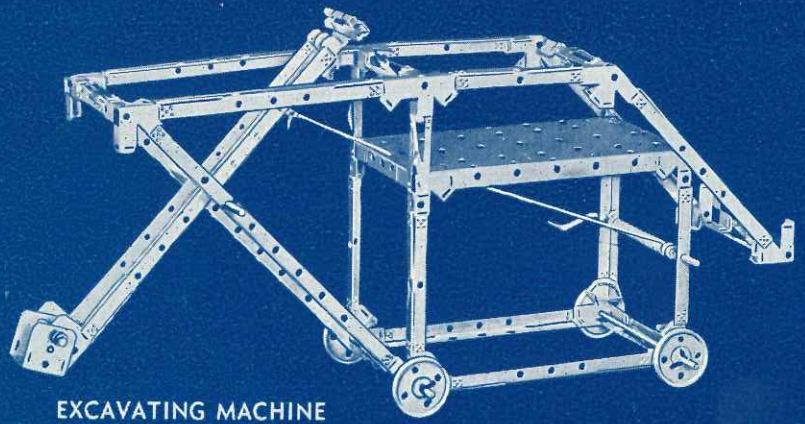
NOTE: The upper ends of the two boom members are connected by an A-0 held by the C-0's connected to the upper ends. The two ends of the base are connected by an A-1 connected to a C-0 at each end. A snap rivet provides a pivot.

SIGN BOARD

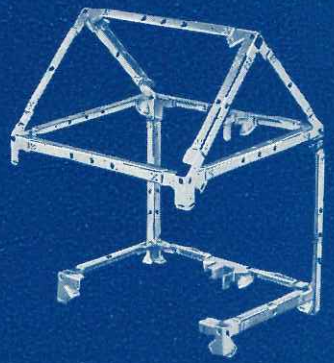
A-1	6	C-180-Z	2
A-2	6	P-12	1
C-90-X	6		

SIGN BOARD

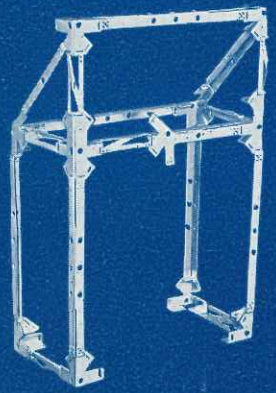
One Which Does Not Deface the Landscape



EXCAVATING MACHINE



WAITING STATION



SIGNAL BRIDGE
A Simple Block Signal For Your Trains

Parts required

EXCAVATING MACHINE

P-4	1	C-135-ZL	2
A-0	8	C-180-Z	2
A-1	6	C-180-DS	2
A-2	6	W-2	4
A-3	4	R-0	1
C-0	2	R-2	3
C-90-X	6	K	6
C-135-ZR	2	CH-1	1

String and Rubber Bands—Not Supplied

SIGNAL BRIDGE

A-0	7	C-135-ZL	1
A-1	3	C-135-ZR	2
A-2	6	C-180-Z	2
C-90-X	6		

WAITING STATION

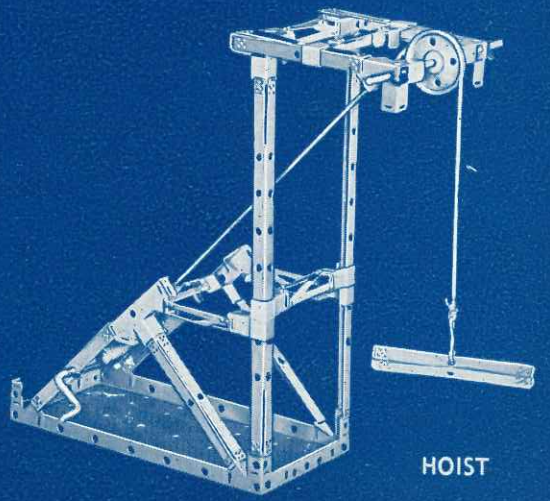
A-0	4	C-135-ZR	2
A-1	6	C-135-ZL	2
A-2	6	C-180-Z	2
C-90-X	6		

NOTE: Try your panels in the roof of this Model.

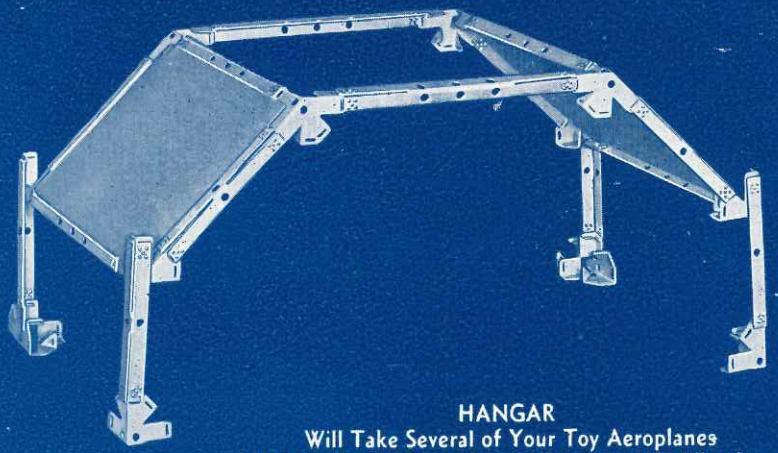
HOIST

P-4	1	C-180-Z	2
A-0	6	W-2	1
A-1	7	R-2	1
A-3	2	CH-1	1
C-0	6	AF	1
C-90-X	4	K	5

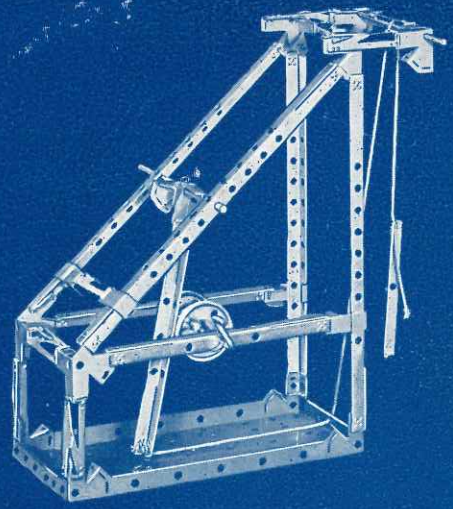
String—Not Supplied



HOIST



HANGAR
Will Take Several of Your Toy Aeroplanes
Hole in the Roof is to Permit Observing the Weather



WELL DIGGER

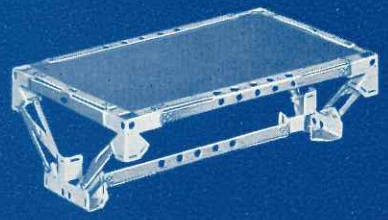


TABLE
For the Board of Directors

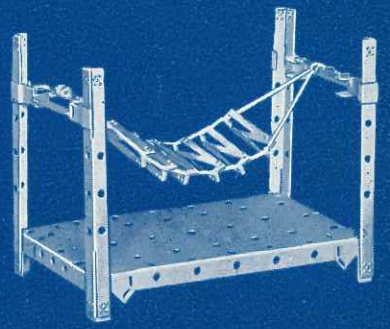
Parts required

HANGAR				WELL DIGGER			
A-1	8	C-135-ZL	2	P-4	1	C-135-ZR	
A-2	6	C-180-Z	2	A-0	8	C-135-ZL	
C-90-X	6	P-12	2	A-1	1	W-2	
C-135-ZR	2			A-2	3	R-0	
				A-3	4	R-2	
				C-0	4	CH-1	
				C-90-X	6	K	

String—Not Supplied

NOTE: Key the two wheels to the crank and pass the short rod through holes in the wheels and fasten into place with two keys. This forms an eccentric.

TABLE				HAMMOCK			
A-0	4	C-90-X	4	P-4	1	A-2	4
A-1	2	C-180-Z	2	A-0	8	C-0	4
A-2	3			String—Not Supplied			



HAMMOCK
The Barrel Stave Kind

Models built with the *Craftsman Size*

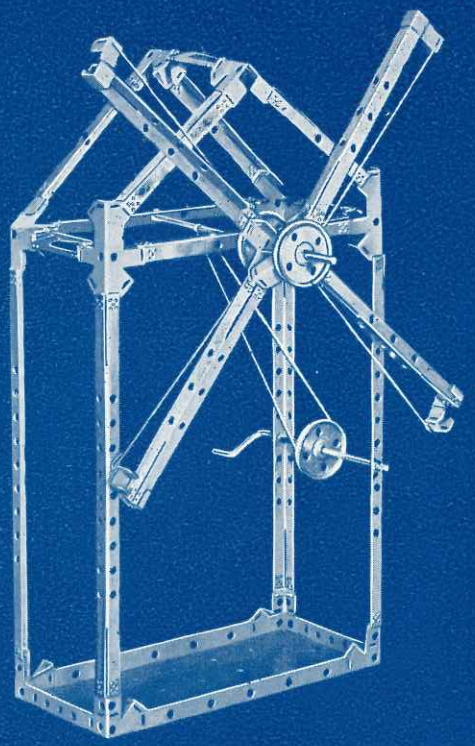
Parts required

WINDMILL

P-4	1	C-135-ZL	2
A-0	3	C-90-X	2
A-1	4	C-180-Z	2
A-2	6	W-2	3
A-3	4	R-4	1
C-0	4	CH-1	1
C-135-ZR	2	K	6

String and Rubber Band—Not Supplied

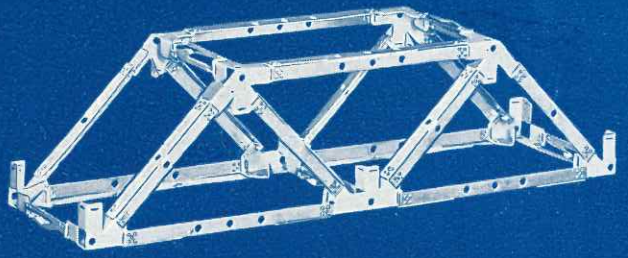
NOTE: For the construction of the hub of the Windmill see the Construction Details.



WINDMILL

DOUBLE BRIDGE SPAN

A-0	5	C-135-ZR	2
A-1	8	C-135-ZL	2
A-2	6	C-180-Z	2
C-90-X	4		



DOUBLE BRIDGE SPAN

CLOCK

A-0	6	C-135-ZL	2
A-1	6	C-180-Z	2
A-2	5	R-4	1
C-90-X	6	K	4
C-135-ZR	2		

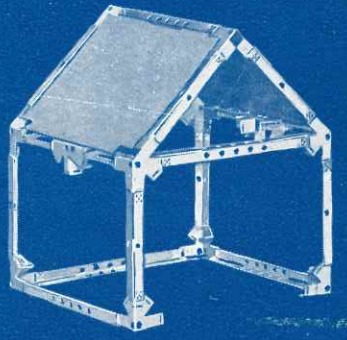
NOTE: Let the pendulum swing freely on the rod and it will cause the hand to creep around the face of the clock.

GARAGE

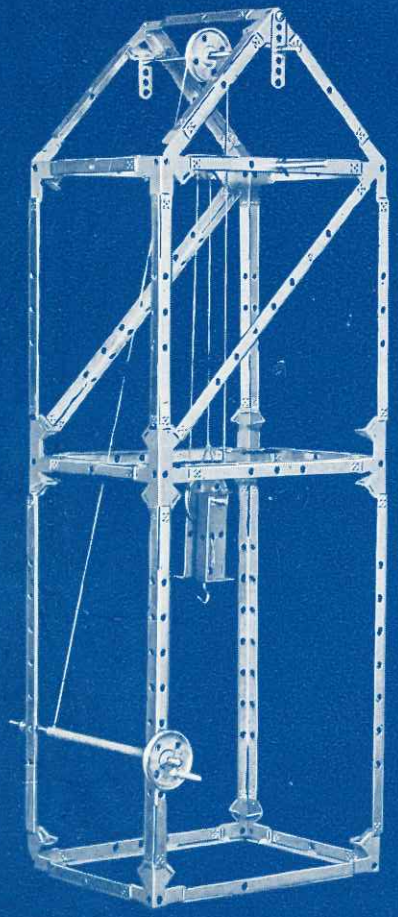
A-0	4	C-135-ZR	2
A-1	8	C-135-ZL	2
A-2	6	C-180-Z	2
C-90-X	6	P-12	2

NOTE: You may cut out 3 extra panels of cardboard or heavy paper, to fill in the walls, using one of your P-12's as a pattern.

CLOCK



GARAGE
Just Right For Your Toy Automobiles

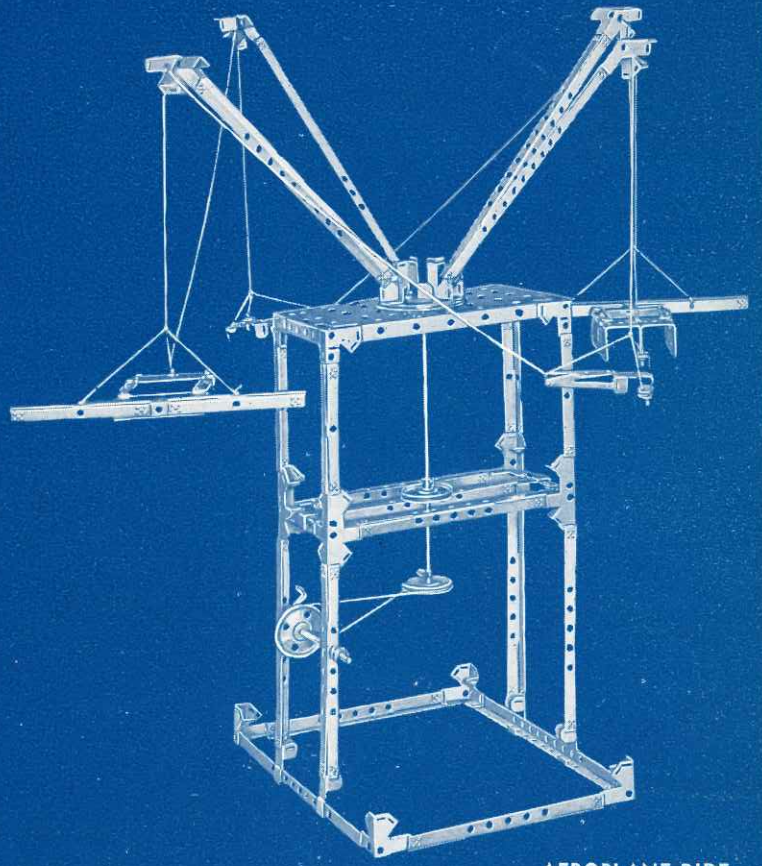


FOUNDRY HOIST
For Lifting Castings and Moulds

SEARCHLIGHT
May be Turned Right and Left or Moved Up or Down By a Single Control

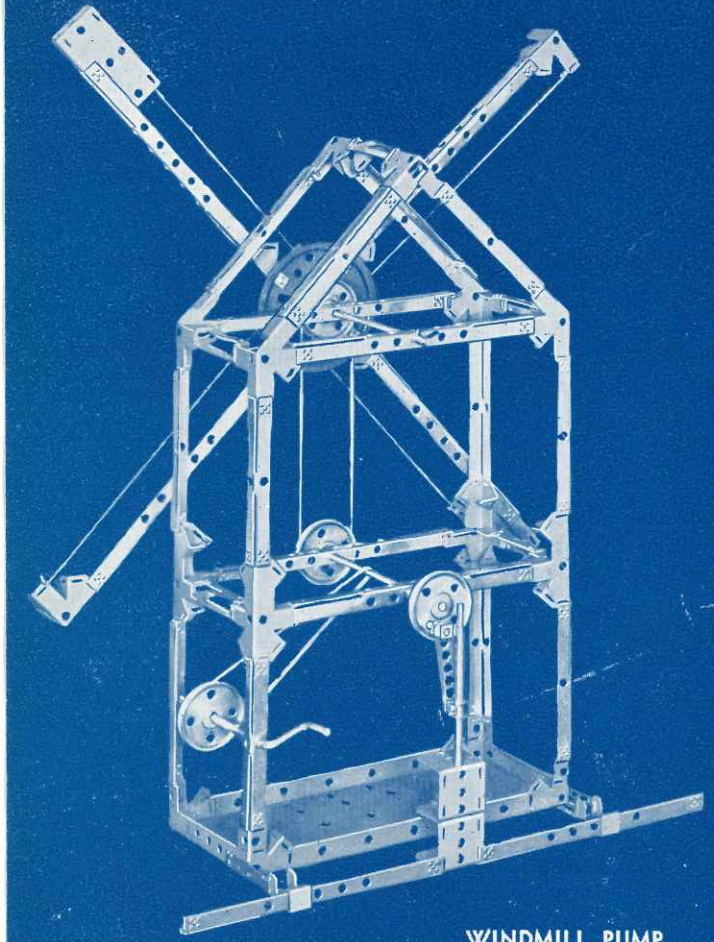
TRAILER

The **DESIGNER SIZE** inaugurates the use of blueprints to supplement the pictures given in the Manual. Refer to your blueprints to obtain detailed information where necessary and for lists of parts required to build the models.

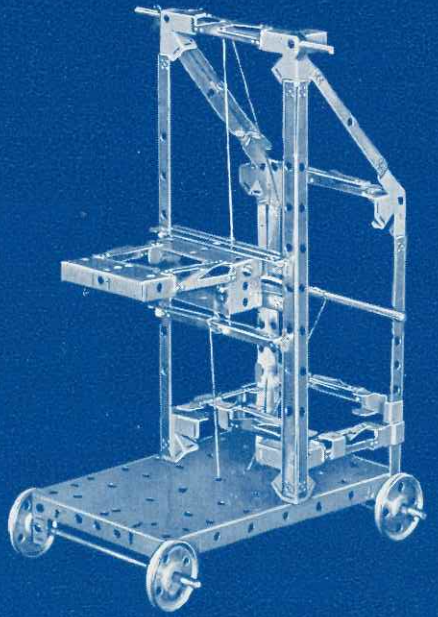


AEROPLANE RIDE

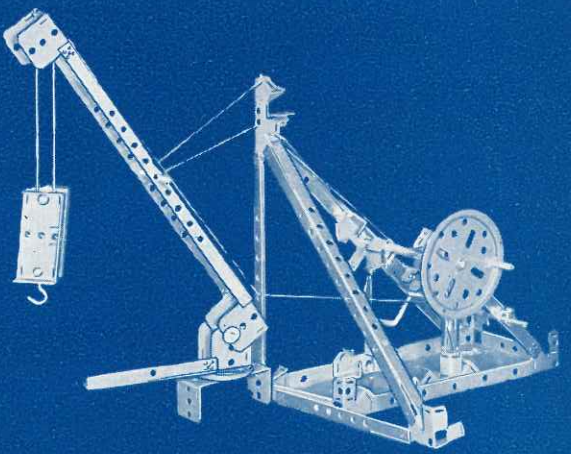
Models built with the *Designer Size*



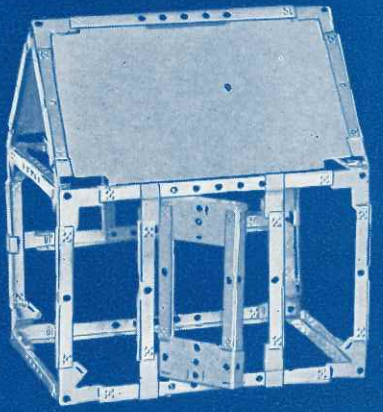
WINDMILL PUMP



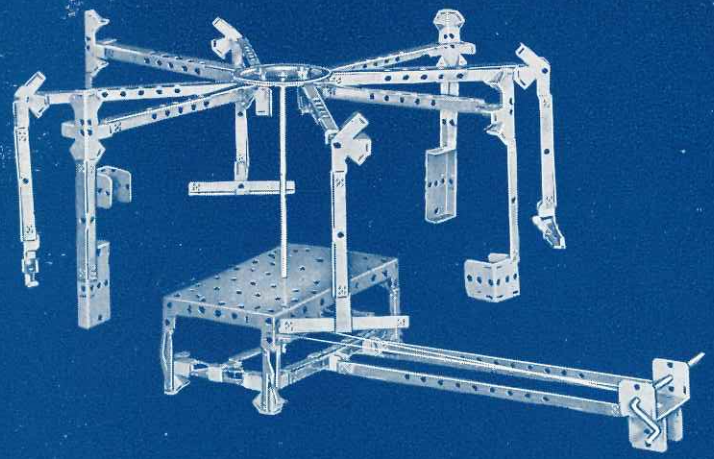
TIERING MACHINE



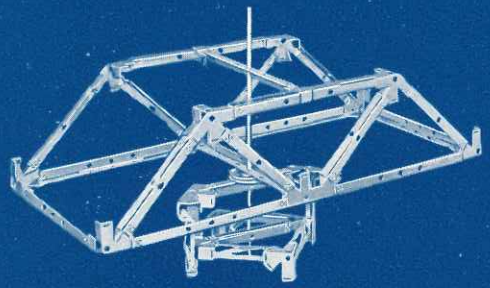
DERRICK



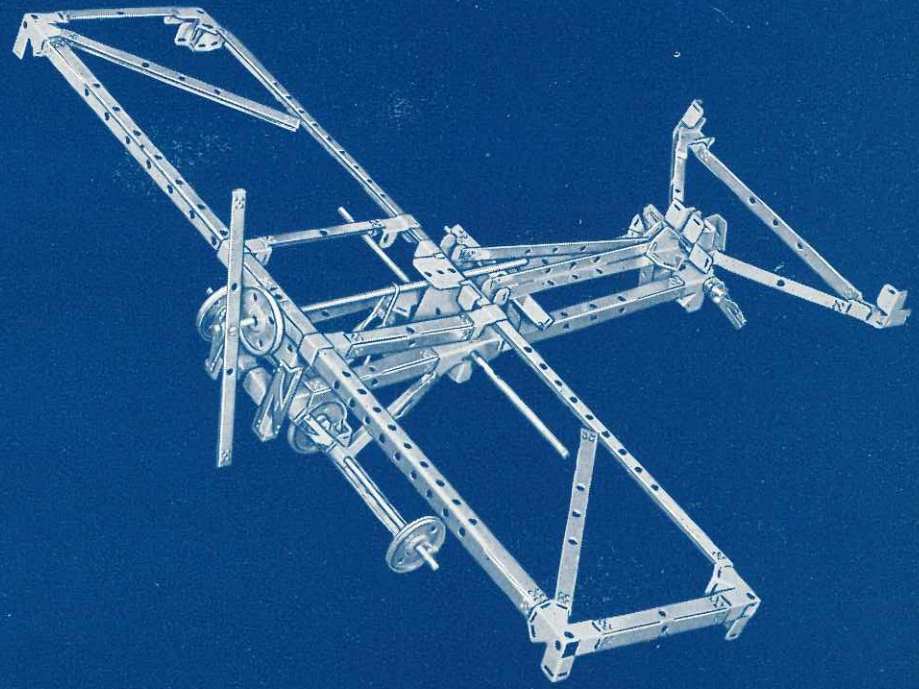
HOUSE WITH DOOR



MERRY-GO-ROUND

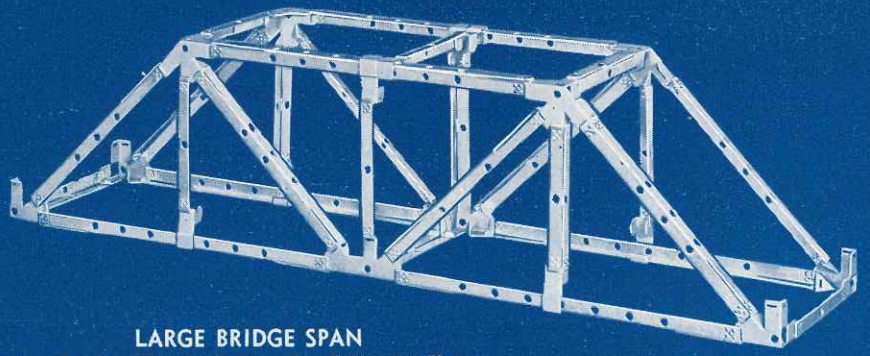


SWING BRIDGE

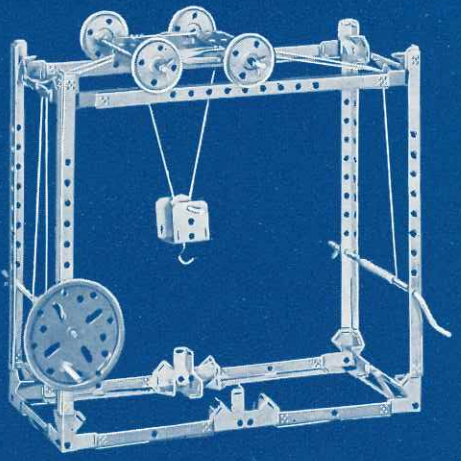


AEROPLANE
A Rubber Band Around the Center Wheel and the Propeller Shaft Makes the Propeller Rotate as the Plane is Moved Across the Floor

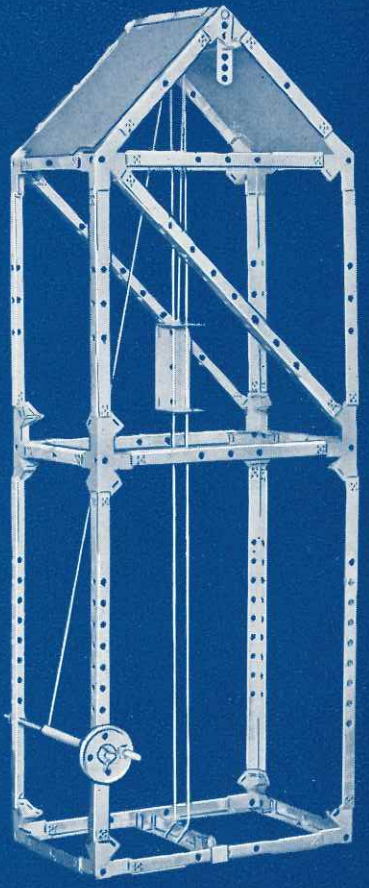
STRENGTH TESTING MACHINE
Use the Hammer to Test Your Skill



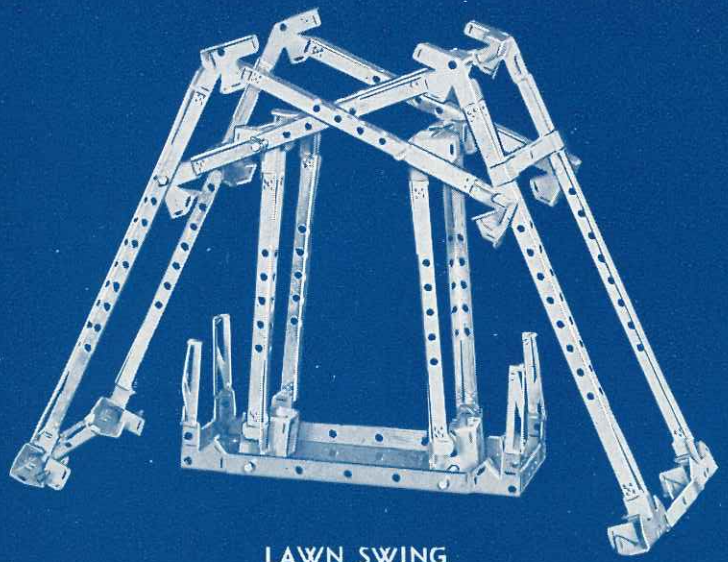
LARGE BRIDGE SPAN
You Can Use This With Your Small Electric Trains



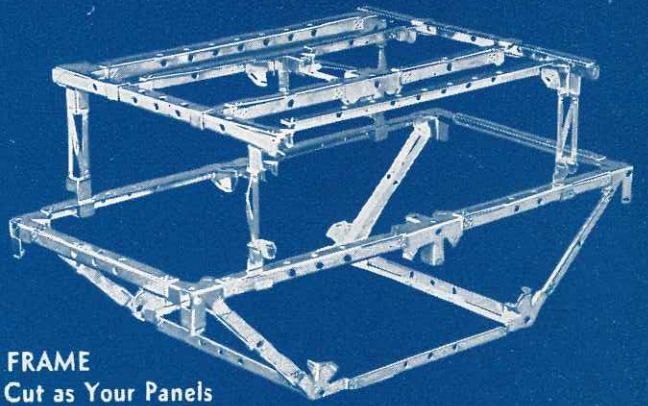
FOUNDRY HOIST
The Wheel Moves the Carriage From Left to Right and the Crank Moves the Hood Up and Down



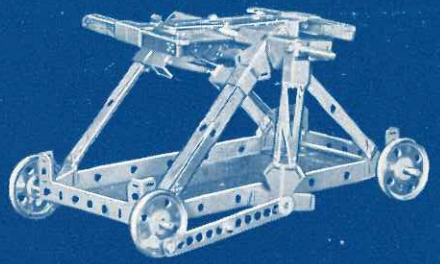
ELEVATOR
Fill in the Walls of the Building With Panels Cut as Those of Your Set from Heavy Paper or Cardboard



LAWN SWING

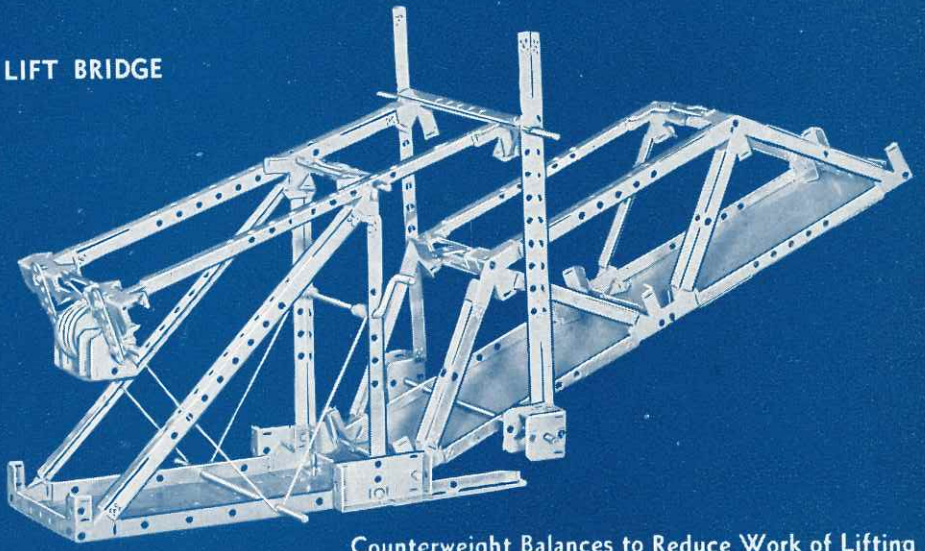


HOUSEBOAT FRAME
Cover With Cardboard Cut as Your Panels

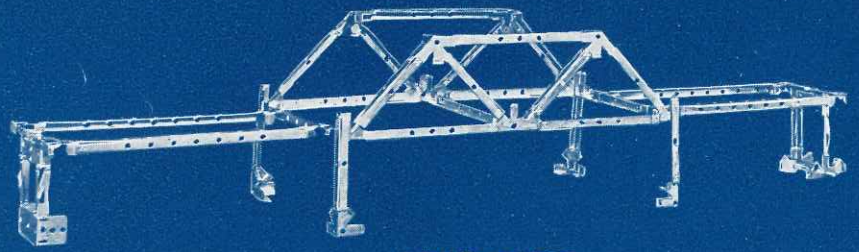


HAND CAR
The Handbars Will Make the Wheels Go 'Round

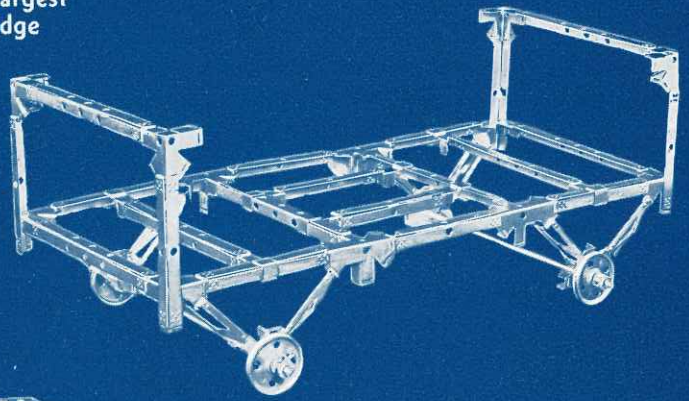
LIFT BRIDGE



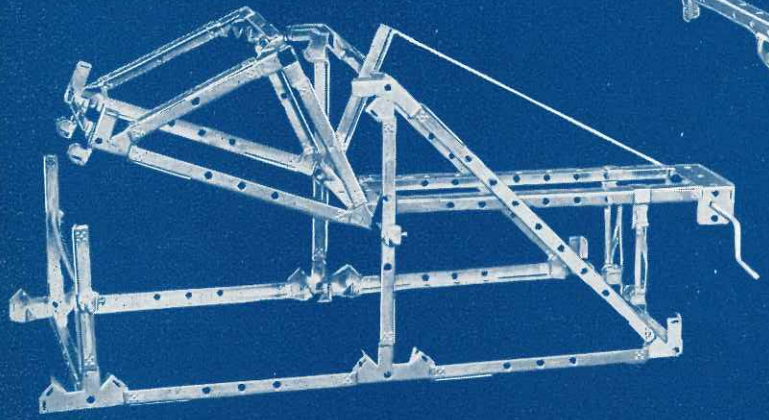
Counterweight Balances to Reduce Work of Lifting



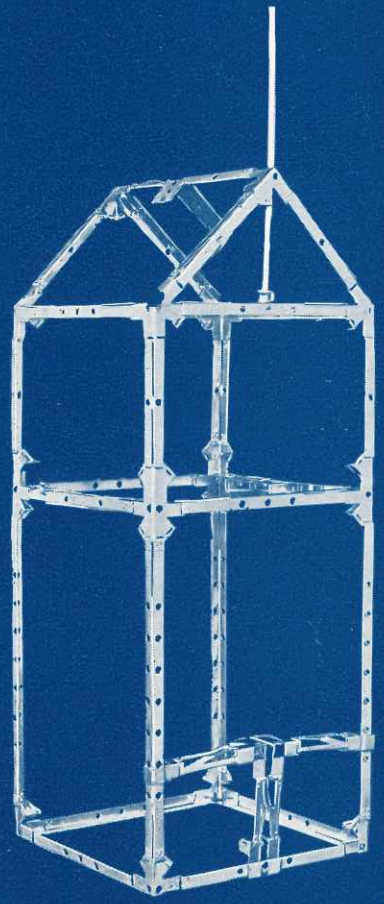
LONG BRIDGE
You May Run Your Largest Train Over This Bridge



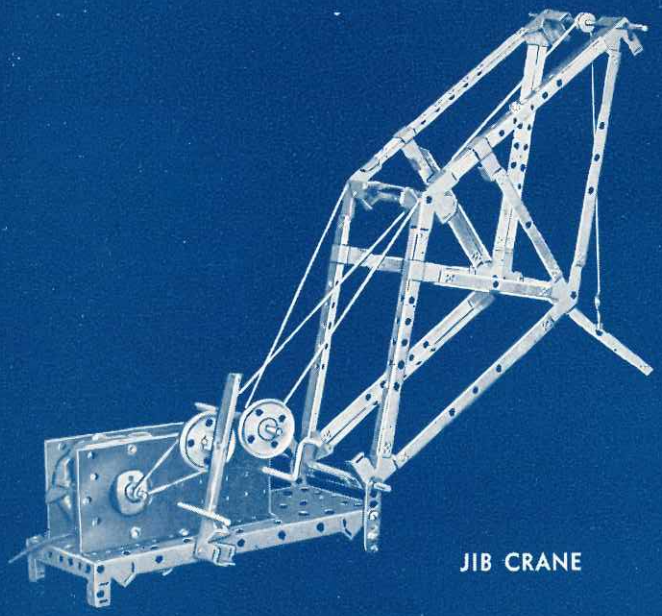
BAGGAGE TRUCK
Complete the Platform With Heavy Cardboard



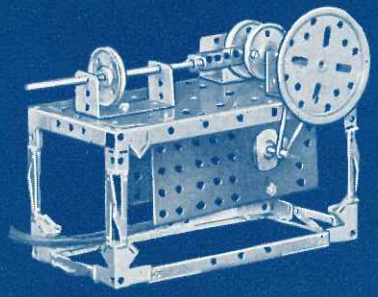
SMALL LIFT BRIDGE



SKYSCRAPER
You May Put an Elevator in this Building

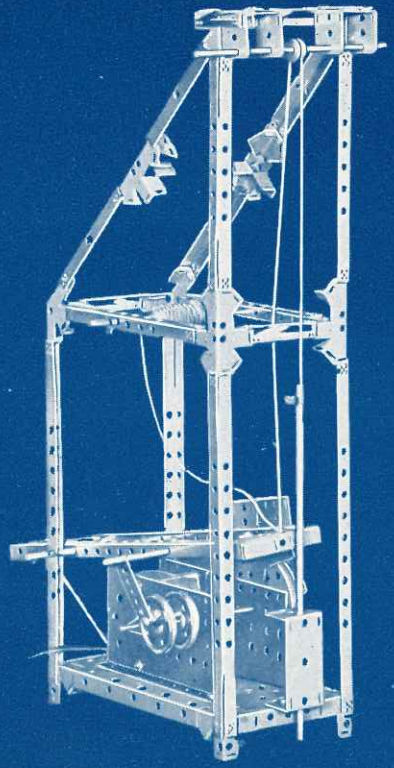


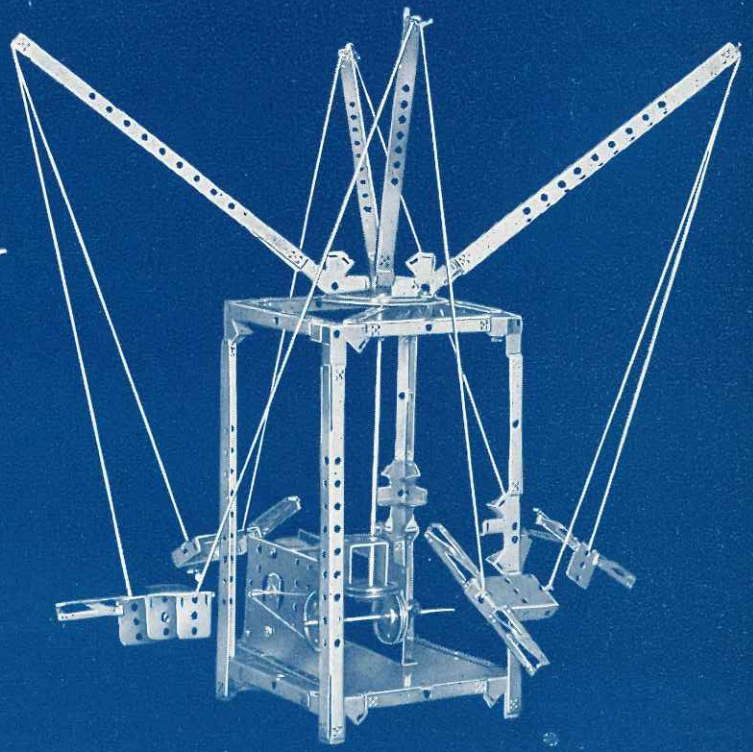
JIB CRANE



ENGINE

WELL DIGGER
Use a Key to Adjust the Drill So It Will Be Lifted Each Stroke

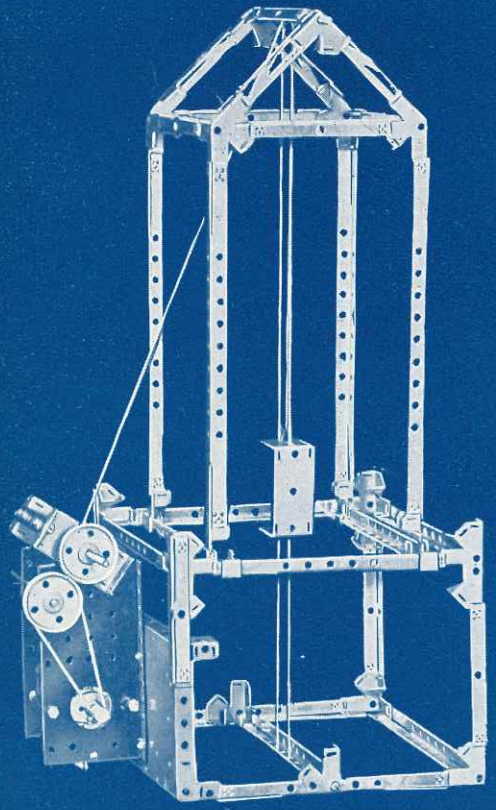




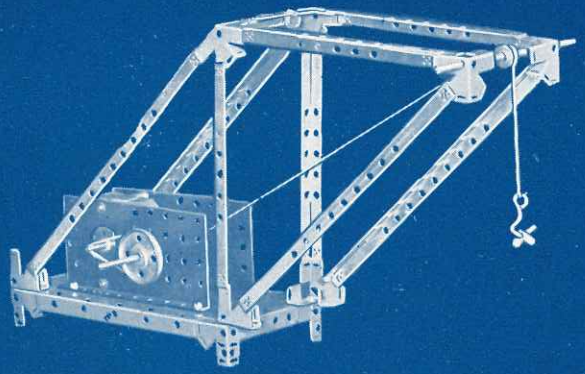
MOTOR DRIVEN AEROPLANE RIDE

THE DESIGNER SPECIAL SIZE introduces a motor to the MORECRAFT users. Each of the models shows a simple drive arrangement requiring no gearing. For details, see your Blueprints.

Models built with the *Designer Special Size*

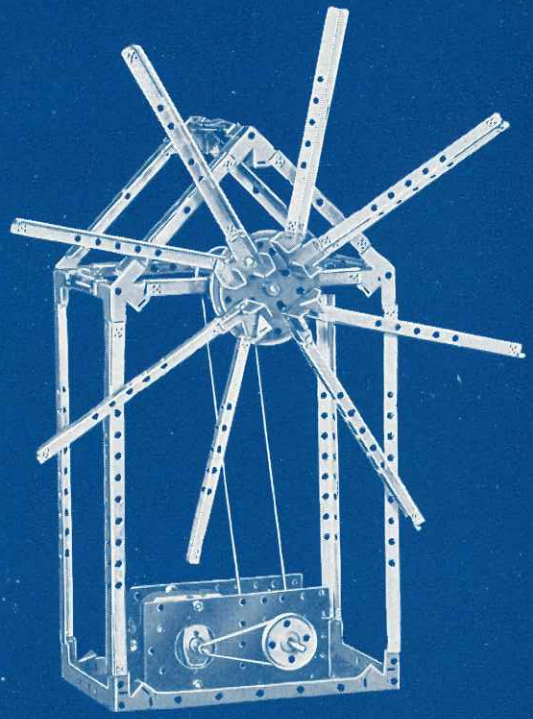


ELEVATOR
A Simple Clutch is Shown



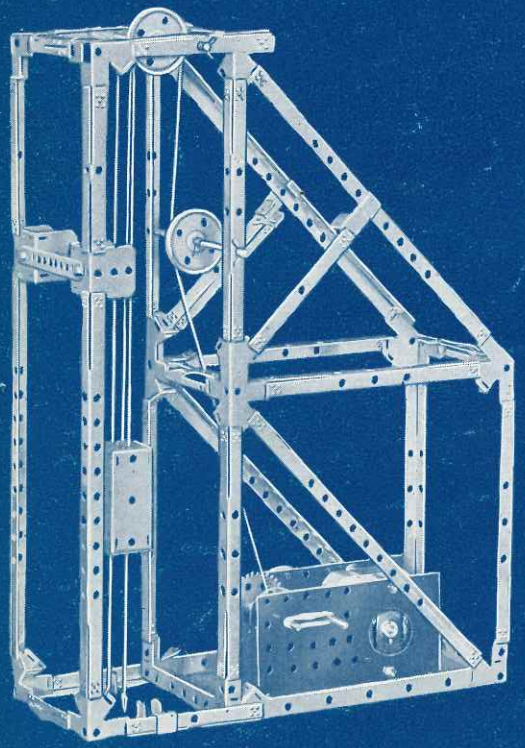
MOTOR HOIST

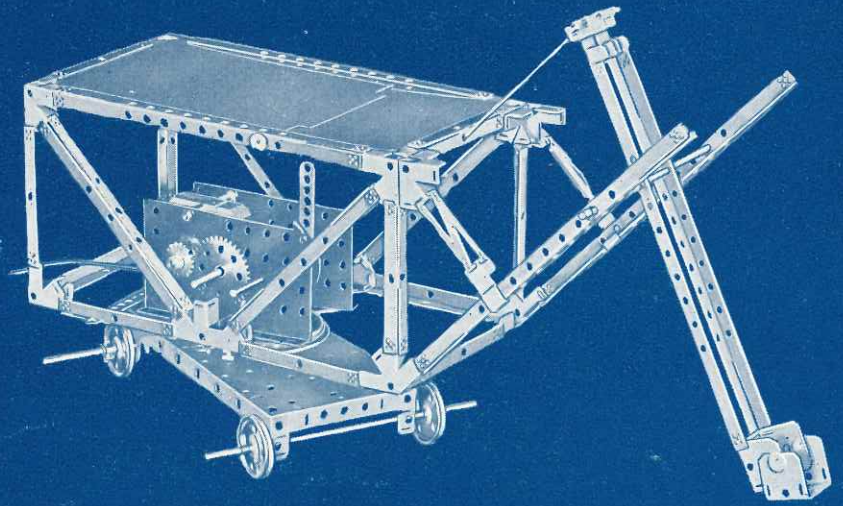
WINDMILL
Make This Into a Windmill Pump



Models built with the *Engineer Size*

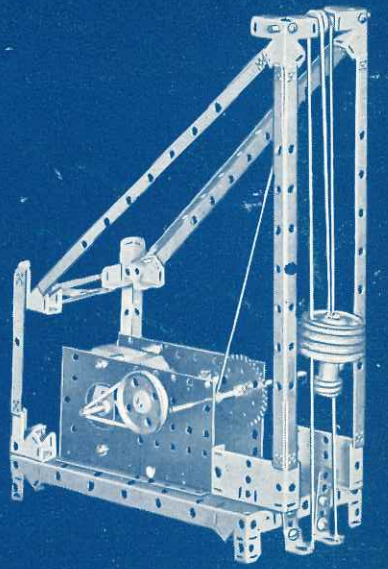
PIT HEAD GEAR
Used Over Mine Shafts to Operate an Elevator





EXCAVATING MACHINE
See Your Blueprints for Construction Details

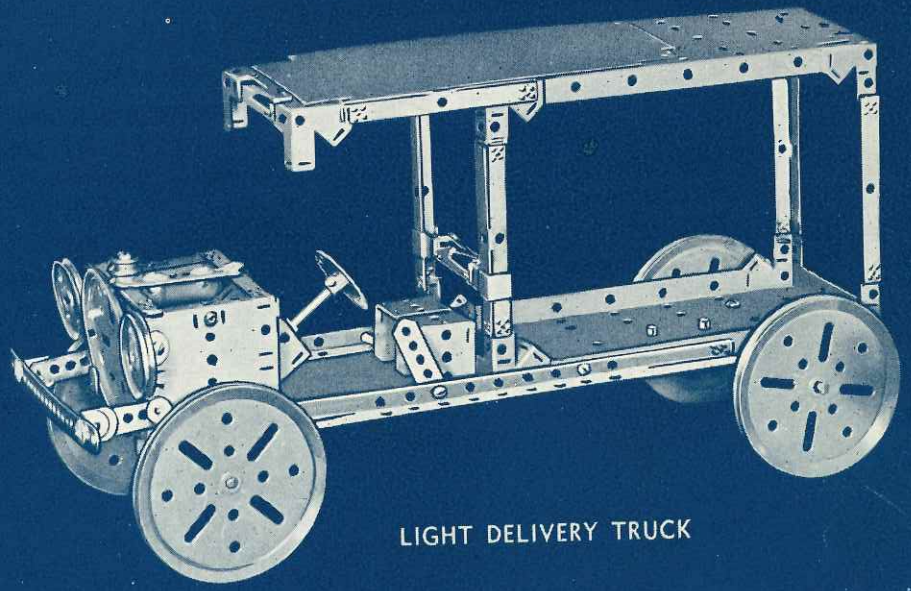
PILE DRIVER



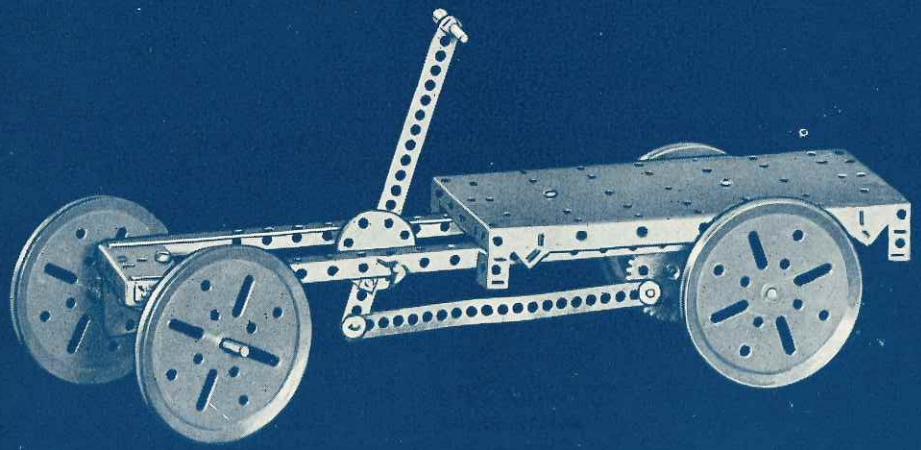
Try Putting Your Motor Into Some of the Models Shown in the First Part of This Manual.

These Models Introduce the ENGINEER SIZE. See the STANDARD GEARING of the ENGINEER SIZE Manual

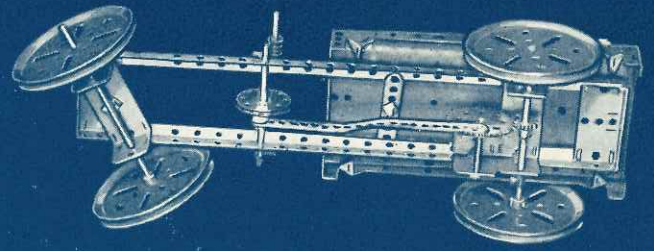
Note: To improve the appearance of the LIGHT DELIVERY TRUCK shown to the right insert panels P-12 into the sides to form a closed delivery wagon. See Construction Details at the end of this Manual.



LIGHT DELIVERY TRUCK

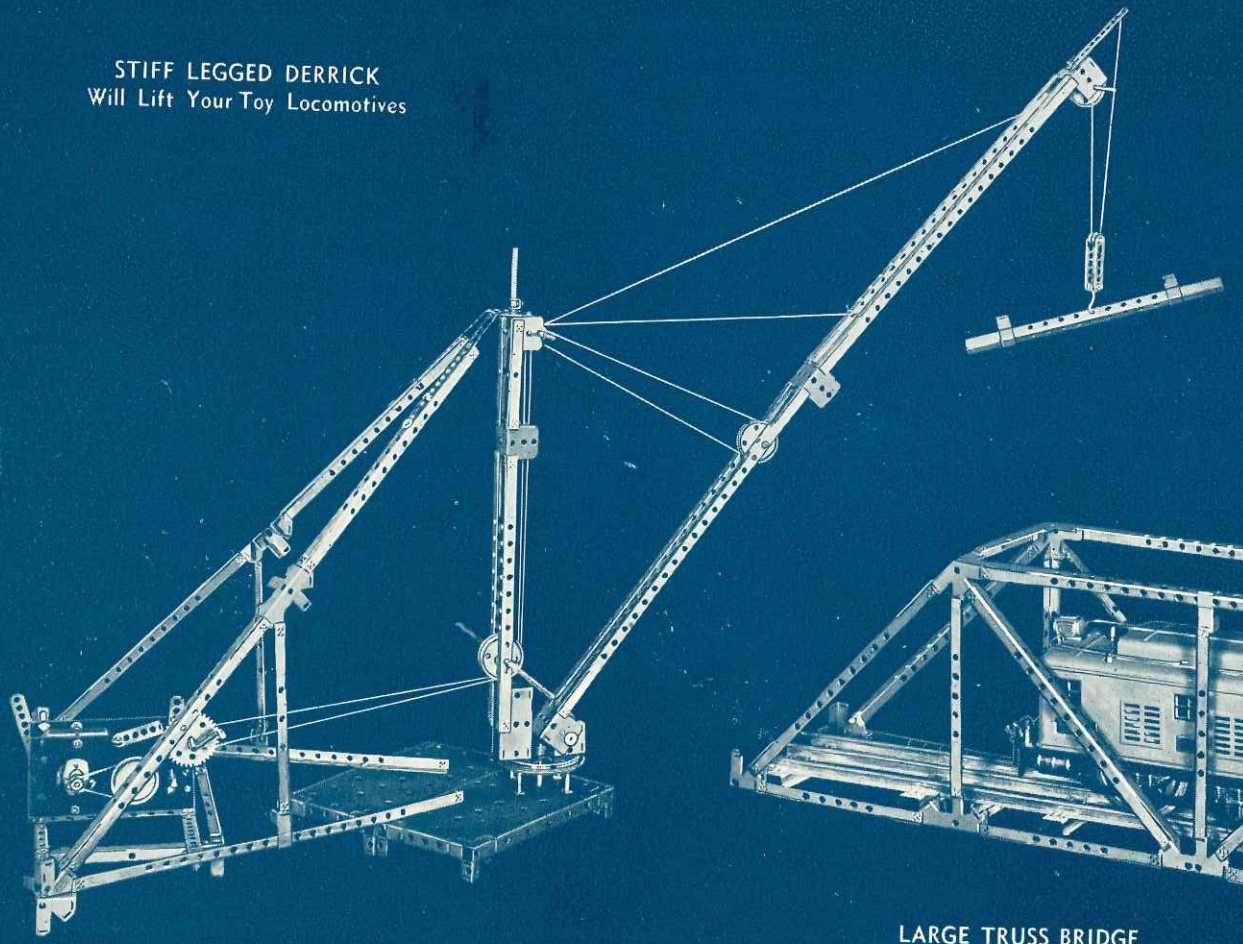


IRISH MAIL
Geared Just Like the Real Ones
See Detailed View to the Right



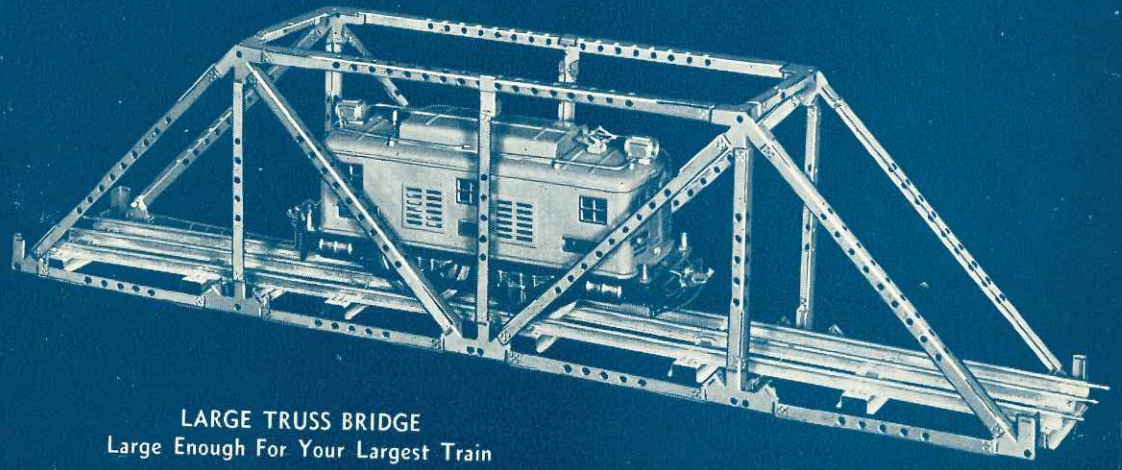
DETAIL OF IRISH MAIL
Shown to the Left. For Further Details
See Your Blueprints.

STIFF LEGGED DERRICK
Will Lift Your Toy Locomotives

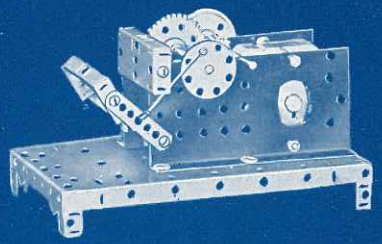


GRADUATE SIZE

This is to introduce the GRADUATE SIZE MORECRAFT. You have in this set a large amount of material. You have had three joining methods. You have learned to read blueprints. Therefore you are ready to proceed in the field of Invention and Engineering. Your opportunity to contruct new and interesting models is limitless. A number of such models have been worked out for you. Two are given on this page. The Stiff Legged Derrick is motor driven. Try to work out a way to drive both the boom and the hook from the motor. The bridge is large enough for your largest train. However, you may make it longer or wider if you want to. Also you can put it up on abutements or make it a draw bridge. Use your blueprints as much as possible.

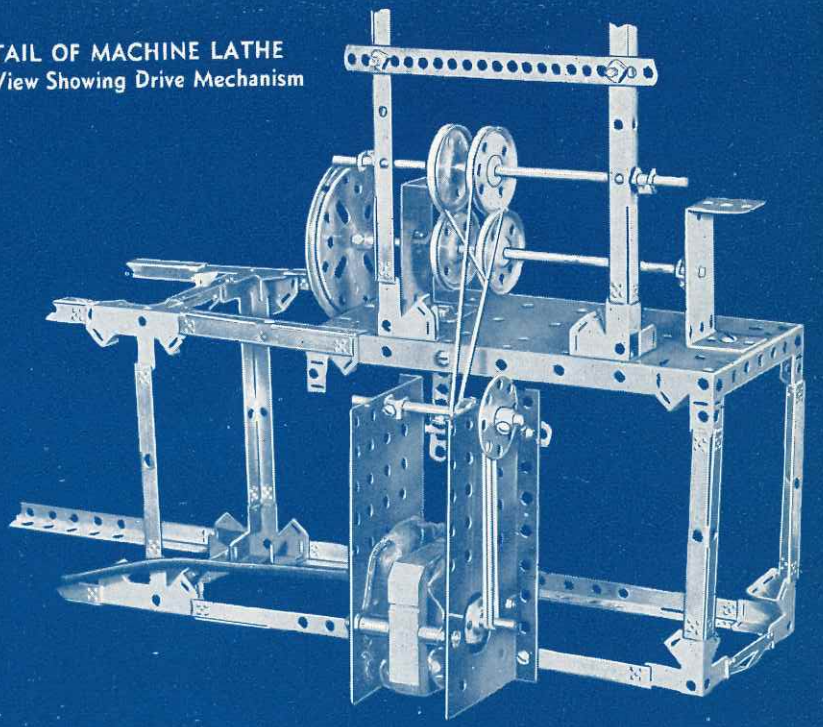


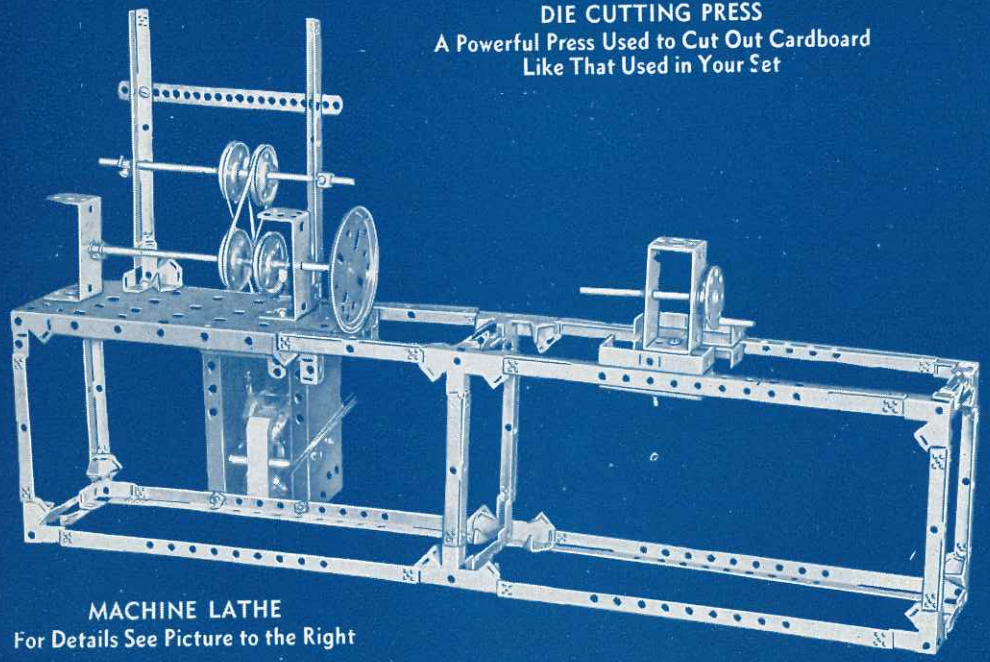
LARGE TRUSS BRIDGE
Large Enough For Your Largest Train



DIE CUTTING PRESS
A Powerful Press Used to Cut Out Cardboard
Like That Used in Your Set

DETAIL OF MACHINE LATHE
Rear View Showing Drive Mechanism





MACHINE LATHE
For Details See Picture to the Right